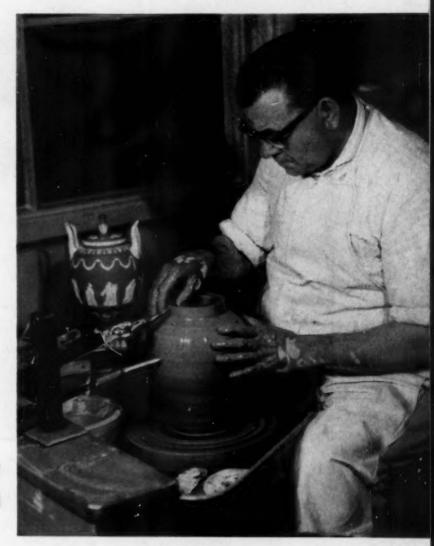




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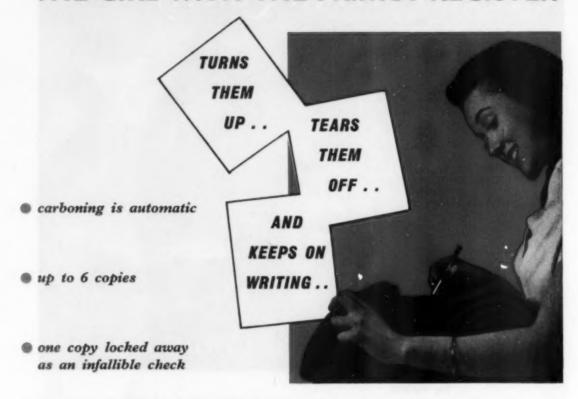
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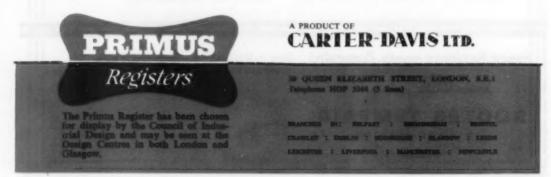


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Inflation clouds the horizon

The British economy is once again in the grip of inflationary pressure. Among a number of warnings over the last month that the economic health of the country is in danger, the most serious is the deterioration in our foreign trading position. The F.B.I. is of the opinion that continually rising production costs are the real culprit, not capacity or delivery problems. Although there has been a rise in export orders and output, the inescapable conclusion is that still not enough goods are going abroad. The only way to solve this dilemma is to face squarely the necessity of cutting costs.

Productivity rising?

- Industrial production is rising slightly at last. In the face of acute labour shortages, this may imply some increase in productivity.
- There are once again more jobs available than there are unemployed.
- Disappointing export performance and a backlog of imports from the dock strike have caused the trade gap to widen alarmingly.
- Machine tool orders are still out-pacing deliveries.
- The drain on our gold reserves is slowing down.
- The building boom shows signs of accelerating.

Higher costs and prices

- Retail prices are rising in response to higher costs.
- Steel is pointing the way to higher raw material prices generally.
- Higher costs at home and balance of payments difficulties abroad are turning the terms of trade against us once more.
- Consumer spending is up, but the rate of increase has slowed down.
- Bank advances are also climbing more slowly.
- And so is the hire purchase debt.



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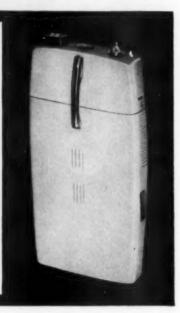
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Industry's Thirst for Power

New power transmission works have claimed a high rate of capital expenditure by the Central Electricity Generating Board during the past ten years. Although expenditure rose from £41m. in 1948-49 to over £35m. in 1959-60 it is still thought insufficient to keep up with immediate and future requirements. The Board now estimates that the expenditure on new transmission works may double in the next four or five years to £70m, annually, which is nearly three times the cost of the whole original grid system.

system so far was 24.2m. kW at the East Anglian coast. end of 1960 and it is forecast that this demand will treble in 15 to 20 vears' time. It is also considered that by the mid-1970's nuclear generation will account for about 30 per cent of the total consumption of electricity in terms of millions of tons of coal equivalent. Oil and indigenous fuel consumption are expected to be approximately double.

The consumption of electricity is expected to be doubled by 1970 and doubled again by 1980-85.

It is envisaged that the greater concentrations of power stations will be in the central coal fields. with others in North Wales, the Bristol Channel, the Thames

The maximum demand on the Estuary, and south-east Kent and

Building. This year the building and civil engineering industry got off to a flying start with one of the largest order books on record, and the pace shows no signs of slackening. New orders in the first quarter of this year amounted to £521m., 10 per cent more than in the same quarter of 1960 and in the final quarter of last year.

Three-quarters of the increase over the preceding quarter came from public authorities, reflective of the large number of roadbuilding contracts which have been placed during the period.

The immediate problem facing the industry is how to increase production while experiencing an acute shortage of skilled labour and some building materials. In spite of this output is likely to remain at least as high for the rest of the year as the record-breaking £561m. output achieved during the first quarter of 1961.

Aero-Engines. Within the next year or two the annual value of aero-engine exports are expected to exceed £100m.

Steel. Unless there is an almost immediate recovery in new orders some cut-backs in production may be necessary. So far this year the expansion of the industry's capacity, from about 26m. tons in 1960 to 27m. tons in 1961, has not been matched by a corresponding increase in demand.

Radios. Makers expect to step up their rate of output again in August and September, after the holiday season.

Commodities

Wheat. World trade in 1960-61 may increase by 4.5m. metric tons over 1959-60. The total world wheat production in 1961-62 is likely to be the same as in 1960, with a possible reduction in Western Europe.

Tea. The production target for Indian tea has been fixed at 900m. lb. a year by the end of the third Five Year Plan in 1966. This compares with a total production of 694.2m. lb. in 1960.

Consumer goods

Milk. It is estimated that the total supplies of milk will tend to increase during the next few years at an average annual rate of 2 per cent.

BUSINESS SHORT-TERM PRODUCTION FORECASTS

Consumer Goods

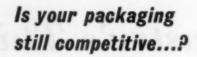
Production of consumer goods will continue to rise during July but at a slightly lower rate of increase. Outlook remains good.

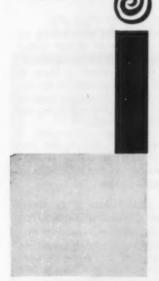
Capital Goods

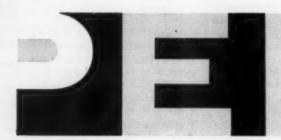
Output of producers' goods will continue to rise in July though the rate of increase will be slightly lower. Future outlook is good.

A summary of the analysis will be supplied on request.

These forecasts are based upon the monthly analysis made by BUSINESS of orders received in contract engineering and contract design. The Editor wishes to thank members of the ENGINEERING INDUSTRIES ASSOCIATION, FEDERATION OF ENGINEERING CONSULTANTS, and other design consultants for their co-operation.







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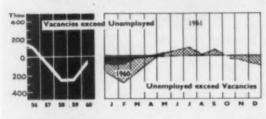
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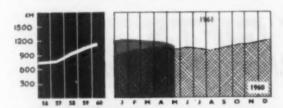
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STATE OF THE NATION 3

FIVE - YEAR TREND Average 1934-100 (All industries) 150 1961 1962







KEY INDICATORS

◀ INDUSTRIAL PRODUCTION

National output is being hampered by an uneconomic distribution of labour. There is a strong tendency for industries working below full capacity, such as cars and durable goods, to hoard labour against an expected growth in demand. Consequently, industries with demand backlogs, such as building and machine tools, have found it impossible to increase output. Nevertheless, the index of production is at last showing signs of rising above the plateau of recent months.

■ EMPLOYMENT POSITION

Labour reserves are at a five-year low. In May there were fewer unemployed than in any month since May, 1956. An increase in registered vacancies, coupled with the fall in unemployment, means that once again the demand for labour is outstripping supply. In May, vacancies exceeded workless for the first time since last September. Both the fall in unemployment and the rise in vacancies was greater than the seasonal average.

TRADE GAP

After several months of improvement, our balance of payments situation had deteriorated sharply. In May the trade gap widened from £36m. to £71m. Exports fell in May by £23m. to £295m. and imports rose by £12m. to £366m. The contrast with April should not be taken too far as that month's result was influenced by several special factors. But the May figures are nevertheless disappointing and have serious implications for the health of the economy.

◀ GOLD AND CONVERTIBLE RESERVES

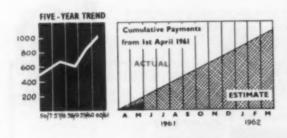
The U.K.'s gold reserves are still falling, but at a slower rate than previously. In May they declined by £16m., compared with £26m. in March. The latest fall was softened, however, by temporary Australian deposits in London. The general picture is that the outflow of the hot money is continuing. Reserves have fallen by £117m. so far this year, compared with a rise of £177m. during 1960.

Industrial production in the first quarter was at the same level as the last quarter of 1960.

Total unemployment in May was 299,000, 41,000 down on the month.

Vacancies were 17,000 up at 354,000.

The trade gap, discounting special factors, would normally have been about £54m. in April.



GOVERNMENT SPENDING

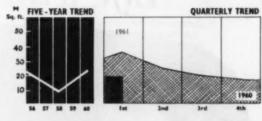
■ EXPENDITURE 'BELOW THE LINE'

Government spending 'below the line' is still running at less than the estimate for the current financial year. To the end of May, total expenditure in this category was £103.6m., compared with an estimate of £1,089m. for 1961-62 as a whole. Advances to nationalised industries and private industry will account for most of this figure.

GUIDE TO THE CHARTS The charts showing Five Year Trends use mostly monthly or quarterly averages so that they are comparable with the charts alongside them showing the more recent trends. Details of the statistics used in the charts, and other related statistics, may be had on application.

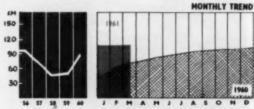
FACTORY BUILDING APPROVALS

Order books in the building and civil engineering industries are going from record to record. Having entered 1961 with orders at an all-time high, they received an even bigger volume of new orders—valued at £521m.—during the first quarter. The large proportion of new orders coming from local authorities suggests, apart from road building, that industry's needs for more services such as water supplies and sewerage work are at last being met



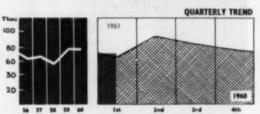
MACHINE TOOL ORDERS >

New orders for machine tools are still exceeding deliveries. Net new orders in March, the latest month for which returns are available, were £11.7m., compared with deliveries of £10.6m. In the same month the outstanding-order book increased by £1m. to £110.4m. The new orders came almost exclusively from the home market and export orders remained static at £24.8m. Delivery dates are still lengthening, and imports are rising steadily to meet unsatisfied home demand.



HOME BUILDING STARTS

Private housing construction is still one of the most prosperous sectors of the building industry. In the first quarter of the year new private housing work was valued at £102m., compared with £88m. in the same period last year. By contrast, new housing by public authorities remained static at some £60m. Progress is still held in check by shortages of craftsmen and some building materials.



New building orders in the first quarter were 10 per cent up on the final quarter of last year.

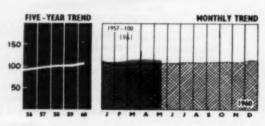
But architects' commissions fell by 22 per cent compared with the same period last year.

The machine tool home order book now stands at £85.5m.

CONSUMER SPENDING

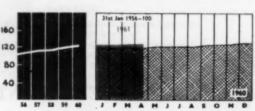
RETAIL SALES

The retail price index is rising, and the trend is likely to continue. In May it reached the record level of 114, compared with 113 in the previous two months. The May result, however, does not show the full effect of recent price rises for cigarettes, bread, and some beers—all important constituents of the index. Further price increases for certain common consumer goods are expected, and the new peak in the cost of living has not yet been reached.



WAGE RATES

The slight upward drift of wages continues, but all in all the picture is one of surprising stability. In April, the latest month for which figures are currently available, the index of weekly wage rates was 124.2, compared with 123.4 at the beginning of the year. Average earnings of clerical and administrative employees in industry is now just over £19 for men, and just under £8 for women. The men's figure is over 6 per cent up on the year.



Retail sales are now running at 3-4 per cent above last year's levels. Household durable goods are picking up, but clothing sales are levelling out.

CREDIT AND PRICES, PAGE 17

'Life with The Lyons'



Miss Bebe Daniels and Skeeter

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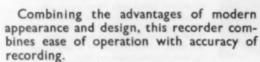


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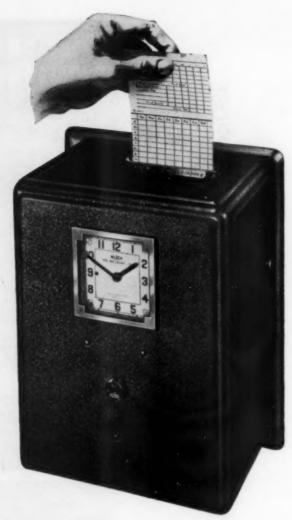
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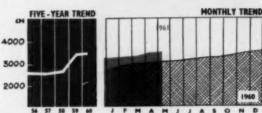
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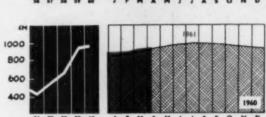
BANK ADVANCES

Bank advances are still rising, but less steeply than previously. In the month to mid-May the gross advances of the 11 London clearing banks had risen by £25m. to £3.571m. This compares with increases of £70m. and £53m. in the two previous months. Average liquidity ratios fell by 0.6 per cent to 31.5 per cent.



HIRE PURCHASE DEBT

The outstanding hire purchase debt is still rising, but only slowly. In April, the latest month for which returns are available, the total debt increased by £5m. to £939m. A rise of the same magnitude was recorded in the previous month. The total is still £22m. below the peak level reached in July last year. Despite the recovery in domestic appliance sale, repayments again outweighed new contracts.



H.P. debt owed to household goods shops fell by £4m. to £308m. in April.

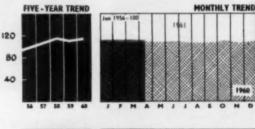
Debt owed directly to finance houses rose by £9m. to £631m.

H.P. motor sales in May were 7 per cent up on the month.

PRICES

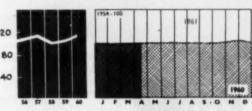
RETAIL PRICES

Price rises have been recorded by several important constituents of the cost of living index. Last month increases were announced for cigarettes and tobacco, bread, and some beers. As yet it is too early to gauge the effect on the official cost of living index, but a significant increase is to be expected. In April, the latest result available, the index maintained at 113. Further increases in the prices of common consumer goods are likely.



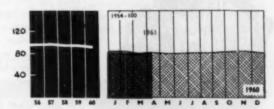
RAW MATERIAL PRICES

The prices of raw materials are now at their highest since last July. In May the index of basic materials and fuel used in manufacturing industry reached 101.6, compared with 100.6 at the beginning of the year. This does not take account, of course, of the recently announced increases of up to 1 per cent in the price of steel. This will accelerate the long-term upward pressure drift of the index, as well as putting further pressure on prices of finished products.



TERMS OF TRADE

The improvement in our terms of trade has not been maintained. In April, the latest month for which complete trade figures are available, the export price index was unchanged at 112, for the fourth month in succession, but the import price index rose by one point to 98. As a result, the terms of trade deteriorated slightly from 87 to 88. The recent worsening of our balance of payments position and inflationary pressure at home are likely to cause a further adverse movement.



The Financial Times Trade Index of Commodity Prices stands at 78.41, 4.32 points down on the year.

The index of tramp shipping freights rose 4.4 points in May to 111.3 (1960: 100).

Tramp time charter rates rose by 3.4 points to 117.1 (1960: 100).

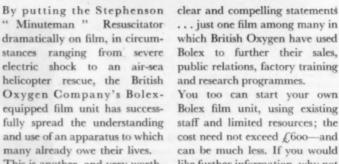




With severe fractures and pinned beneath debris, a casualty who is beyond the aid of normal artificial respiration, but, as the film dramatically shows, not of the Stephenson "Minuteman" Resuscitator

Use and maintenance of the suitcase-sized apparatus were simply and clearly shown in The

British Oxygen film.



This is another, and very worthwhile, proof that a Bolex can turn complex explanations into

By putting the Stephenson clear and compelling statements which British Oxygen have used Bolex to further their sales, public relations, factory training and research programmes.

You too can start your own Bolex film unit, using existing staff and limited resources; the and use of an apparatus to which cost need not exceed £600-and can be much less. If you would like further information, why not write to us? Our Industrial Department will be glad to help you.



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... then you would have ANSAFONE - Britain's foremost telephone answering and recording system. Think what this would mean. You need never miss a telephone call-day or night! Your customers, for example, can telephone their orders after office hours for prompt attention the following morning. Long reports from representatives can be sent without distracting staff from urgent work and during cheap rate periods. Calls may be received and recorded without waiting for a personal reply-in other words use your telephone as a long distance recording machine! You can help your customers and put your business ahead of your competitors by installing an ANSAFONE system now. The complete ANSAFONE service can be rented for as little as 2d. an hour-a fraction of what you and your customers will save in telephone bills!

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FACTORY: Frimley Road Factory . Camberley . Surrey . Telephone Camberley 3401



LETTERS

If the ship goes down too . . .

A Director of this Company is in the near future undertaking a sea journey of some 6 to 7 days' duration, and proposes taking his car on the same vessel. The shipping line in question require an indemnity signing before they will accept the vehicle as 'unpacked' cargo. The implication of this indemnity is such that assuming the worst happened, the owner of the vehicle would be responsible for footing the bill for a new liner!

The terms of the indemnity are as follows:

"In consideration of your accepting the above mentioned vehicle for shipment by the vessel named, 'unpacked,' then I hereby agree to indemnify and to keep indemnified you, your agents, and servants, and all whom it may concern against all damage, liability, claims, costs, charges and expenses whatsoever in respect of the said vessel before, during and after shipment and until discharged at the Port of destination.

"I agree that your Company, is in no way responsible whatever for the loss of, or any damage or injury to the vehicle, or any accessories, tools or loose parts however caused, and even if caused by unseaworthiness or unfitness of the ship, at the commencement or end stage of the voyage, or by the negligence of the Company, its agents or servants.

"I guarantee that when tendered for shipment the vehicle shall contain no cotton waste, india-rubber solution, petrol, spirit, oil, water or liquid of any description, or any other articles or substance of a dangerous, damaged or inflammable nature, and I hereby accept responsibility for all and any damage which may occur, or liability you may incur, should any such liquid or substance be left in any part of the vehicle."

Your views and comments would be appreciated on this rather novel situation.

H. J. SMITH
Director and Secretary.

Raglan Engineering Co. (1954) Ltd. Raleigh Street, Nottingham.

We do not doubt that our comments were much the same as those of Mr. Smith.—EDITOR.

Up-to-date profession

We solicitors are these days a most up-to-date profession using every modern office aid we can find and also reading BUSINESS.

In my office I have: -

Electric postal franking machine.

Tape dictation machines.

Electric accounting machine.

Internal telephones.

Stories like that of Mr. Joseph Thompson (in your May issue) die hard but are no longer true of us as a profession.

For reasons of etiquette permit me to sign.

JOHN DOE

News Letter for clients

As a subscriber to your Journal I have read with much interest the article in your June issue written by Roy Reemer on the merits of a House Journal.

I thought you might be interested in knowing that this Company issue a News Letter every two months which is directed at the trade comprising dealers and wholesalers alike. This News Letter is also posted to our distributors all over the world.

We have found these to be one of the best efforts of our Public Relations Department and we are happy to say the recipients do not merely throw it in the wastepaper basket but take the trouble to read it. This is borne out by the number of letters we receive on articles we publish and chiefly by comments made to our representatives when they visit our customers.

The Eversharp Pen Company Ltd., P. SASSE Newhaven, Sussex.

Planning service provided

In your May issue you included an article under the heading, "Management at Work," which describes the planning services offered by a number of companies.

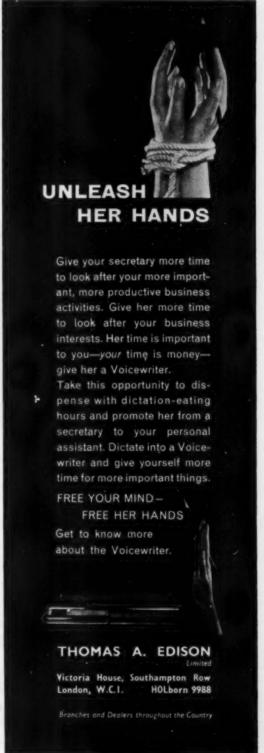
We do not challenge the accuracy of your statements but we would suggest most strongly that it is misleading since you mention specifically by name only four companies.

This company has, since its inception in 1927, offered a planning service entirely without obligation which has been widely used and much appreciated. However, we are well aware that there are a number of other companies who also offer a similar service but do not seem to have been mentioned in this article. We shall be very interested to hear your comments.

Fanfold Limited, Bridport Road, London, N.18. L. A. WELLS Manager, Publicity Department.

No claim was made that the list in our May issue was exhaustive. We are glad to hear of another firm providing a similar service.—EDITOR.

JULY, 1961



aual









METAL FURNITURE



The swivel chairs illustrated are adjustable to give the most comfortable seating posture for efficiency and to avoid fatigue. The comfortable and dignified chairs combine in matching suites and add distinction to the executive office.

Du-al have the answer to all your seating problems.

DARE-INGLIS PRODUCTS LIMITED

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Telegrams: DU-AL, HARROW

BUSINESS



When choosing a computer system, here is the first question you should ask: Is this the right system-in size and other characteristics-for the job it has to do?

Other questions, equally important, are: Will it become out-oflate owing to changing techniques? Can it be adapted to developing requirements, both in volume and in variety of needs? Ferranti have the answers to your questions.

As the pioneers, first in the world to market an electronic digital computer, Ferranti have developed a range of computer systems unequalled in scope by any other manufacturer in Europe. If any computer can match your exact requirements, Ferranti have it.

Adaptability to future needs depends partly on design, partly on programming possibilities. Ferranti's exceptional experience in the development of programmes is your best assurance for the future. Ferranti have trained more than 1,000 programmers; Ferranti's half-million pound programme library is unmatched in this country.

Many businesses with intermittent needs make use of the Ferranti Computer Centre, where you can always see a computer at work. Please write or telephone for an appointment: Ferranti Ltd., London Computer Centres: 68/71 Newman St., London, W.1 Museum 5040 and 21 Portland Place, London, W.1 Langham 9211. Works: West Gorton,

RANGE OF COMPUTER SYSTEMS

PEGASUS · MERCURY · PERSEUS · ARGUS · SIRIUS · ORION · ATLAS FERRANTI LTD. HEAD OFFICE: HOLLINWOOD, LANCS

These are among the 50 leading concerns who have invested in Ferranti computers.

Babcock & Wilcox, Limited The de Havilland Aircraft Co. Ltd. The General Electric Company Ltd. Imperial Chemical Industries Limited C. A. Parsons & Company Ltd. Shell International Petroleum Co. Limited The United Steel Companies Limited Vickers-Armstrongs (Aircraft) Ltd.

Ferranti's successful operating experience can be at your disposal. The moral—see Ferranti first!

dual









METAL FURNITURE



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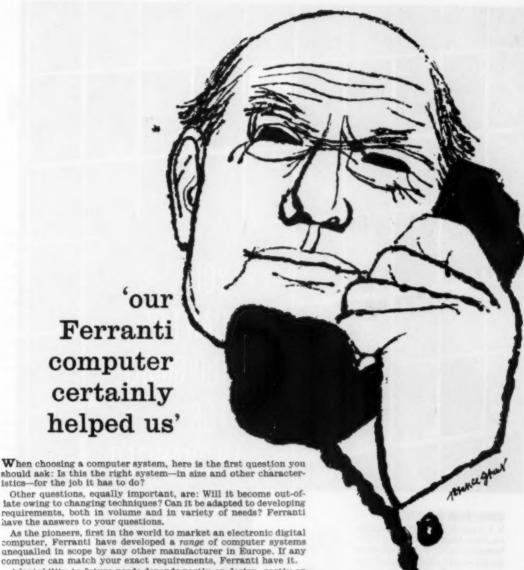
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BUSINESS



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Ferranti's successful operating experience can be at your disposal. The moral-see Ferranti first!



New doors open in Moscow

"TRADE FAIR EXCELLENT PUBLIC RELATIONS"

Most firms went to Moscow for the British Trade Fair expecting, and equipped for, a trade fair in the Western sense. The actual event, according to Fred Stacey who covered the fair for Mather & Crowther the publicity consultants, proved to be 10 per cent a trade fair and 90 per cent a public exhibition.

by Paul Mackenzie

pronouncements, soon lost its initial diffidence and became rather bolder in its approach to the British.

The demand for tickets, issued by the Russian authorities, was far greater than supply, and a good deal of under the counter loans of exhibitors' passes went on.

Interest in capital goods was intelligent and informed, but it was the consumer goods stands which really drew the crowds. The stand of Ronson, the cigarette lighter manufacturers, was a constant draw. How does it work? How much does it cost? Where can I buy one in Moscow? If not, why not? And finally, "If you aren't allowed to sell me one, why don't you give me one?" Offers of up to £40 were made for a single lighter.

Apart from the attraction of consumer goods, the over-riding interest of the average Russian visitor was in the British way of

Following Mr. K's unexpected life. The five students who were £3 a copy. Ronson's leaflets were and convivial visit, it was possible interpreting on the Pressed Steel going at the rate of 15,000 a day. to sense the whole atmosphere stand were bombarded with quesequipment that had been held up cost?" "How much were your by the customs was released. And shoes?" "How much does the the Soviet public, always quick to British worker earn?" "How many Britain?"

> demand of the Russian public for literature of any kind. There was even said to be a flourishing blackmarket in the town for hand-outs.

> The Pressed Steel prestige giveaway booklet was reputed to

Actual orders resulting from the changing. On the official side, tions such as "What did your suit fair, apart from the last-minute buying of practically all the exhibits, might at first sight appear to be disappointing. But old hands read between the lines of official murders a year are there in at the game of selling to Russia will tell you that it is a very slow One of the most striking aspects process. Much ice has to be of the fair was the insatiable broken, and much effort expended in finding the right man in the Government buying agencies with authority to make a deal. And break ice and open up contacts the fair certainly did. Even those firms who did not secure immediate change hands among Russians for orders will have done valuable



Stock Exchange? Don't know why, but I always assumed you were with the circus.

Leo III enlists for Fort Dunlop



What Leo III can do for you

Invoicing and sales analysis Sales forecasting Production scheduling and control Engineering and insurance Stock and warehouse control Market Research analysis

Accounting, costing and

Dividend warrants and registrars' records

ETC., ETC.

Labour efficiency calculations

IN 1962 a Leo III Automatic Office, the fastest, most flexible, and most reliable Leo yet, will start work at Fort Dunlop, the largest factory in the world-wide Dunlop organisation, where the famous Dunlop tyres are made.

What Leo III will do for Dunlop

It is planned that the installation will progressively take care of a wide variety of functions. At Fort Dunlop, LEO will produce invoices and accounts for the vast tyre replacement market-garages and distributors whose 5,000 orders a day are chosen from 30,000 different items.

In an integrated system it will produce more informative and more up-to-date sales statistics and will forecast future sales, taking current trends and seasonal factors into account. From these forecasts and statistics, LEO will be able to arrange automatically for the replenishment of Depot stocks, and make a breakdown of production requirements for scheduling purchases and manufacturing loads.

In addition to this, LEO will analyse factory production and report to management on deviations from budgeted performance and costs. It will control stocks of raw materials, engineering parts and finished products. And it will do all the necessary calculations for the 9,000 employee payroll.

The fastest Leo yet

LEO III will be able to handle this great work load because it is fast even by computer standards. It is fully transistorised. It reads and records on highspeed tape decks. It prints its results on an Anelex machine at 880 lines per minute. Time sharing arrangements ensure that the computer itself never has to wait for ancillary equipment to catch up with it.

LEO III can even work on several jobs at the same time, sharing its large magnetic core 'memory' between them automatically. And no expense has been spared to make it more reliable. In fact, LEO III is so reliable that special 'breakdown exercises' have had to be devised to keep maintenance engineers in practice.



LEO COMPUTERS LTD · HARTREE HOUSE · QUEENSWAY · LONDON

MARCH OF BUSINESS CONTINUED

spade work towards future contracts. And British businessmen as a whole will find their relations with Russia a little less thorny as a result. In Mr. Stacey's words: " It was a first-class piece of public relations for British industry, even if we didn't all come back with full order books."

More planesmore trade

At least one strong argument may be advanced in favour of opening the air routes to nonnationalized operators. This is the impetus it would give to the British aircraft industry.

The supporting evidence for this assertion seems to have been provided by the order from British United Airways-who hope to win permission to run regular servicesfor 10 new jetliners.

British aircraft manufacturers have been handicapped in trying to sell to the world in face of American competition by the fact that they did not have a broadbased home market.

The private operators have not got their permission yet, but this token of their need for planes if they do get it gives new hope for Britain's chance of earning more overseas.

"We're not rushing it"

The Rt. Hon. Harold Macmillan is reported to have said, when interviewed about President Kennedy's advice for an early British entry into the Common Market: "I don't think we ought to rush it."

Since the Common Market has been in existence for over three years, no one could possibly have suspected Britain of rushing it need not have worried. When the the other way round." Liège International Fair was de-

clared open earlier this year by Paul Spaak, the Belgian Vice-Premier, it was found that all but 20 firms in Britain had heeded the P.M.'s directive.

The space originally set aside for Britain and offered ever since last autumn to over 4,000 engineering firms, but accepted by only these 20, had long since been snapped up by other European companies.

Seven international conferences of engineers and technicians were held throughout the run of the exhibition. British lecturers were invited to read papers and to demonstrate equipment, but "we're not rushing it "

A large exhibition of ancient and modern sporting guns and rifles was held within the framework of the fair. Every member of the British Gunmakers' Association was invited to show British sporting guns, an article for which this country is world famous and for which there would be a terrific sale in Continental countries. Not one was interested. "We're not rushing it . . . "

Advertisers: the quilty men?

In submitting their memorandum to the Royal Commission on the Press, the Institute of Practitioners in Advertising were answering charges made against their industry and so were necessarily tendentious. But in their anxiety to clear themselves they were not shrewd enough to avoid a direct contradiction. Exonerating advertising from blame for difficulties of small circulation newspapers in recent years they say "falling circulations are the result of losing a competitive battle with rivals—as a newspaper, as a magazine. The loss of that battle is the precursor of the loss anyway, but the Prime Minister of advertising revenue; it is never

vears ago a number of big national advertisers found they could cover the entire population by using a few large circulation papers just as well as by running a multiplicity of small accounts. They cut out whole classes of publication with one single decision. The question of editorial quality or of rising or falling circulation did not even enter into consideration. The result was a vicious spiral. Falling revenue led to lower editorial quality, which led to a further loss of revenue-and so on.

All change for experience

If you are an executive in a big firm you are probably fed up to the teeth with the way your expensively trained apprentices leave you as soon as they receive their indentures.

On the other hand, if you are the boss of a small company, you are probably wondering where you can lay hands on some skilled technicians.

An answer for both may be found in the Engineering Industries Group Apprenticeship scheme.

Basically EIGA enables these firms to get together in groups and to exchange their youngsters for various periods of their apprenticeships.

Lord Davidson, president of the Engineering Industries Association. which started the scheme, told me that in his opinion small firms must now accept their share of the responsibility for the training of Britain's craftsmen.

It is easy to see some of the advantages of this idea: first, because the boys move around they get a social as well as an industrial education. Second, there is less tendency for them to leave their parent firm as soon as they have finished their training since they have already worked out their wanderlust. Third, the scheme could probably double our reserves Now this is simply untrue. Some of skilled men in 10 years.



SERVICES

herald time saving at



... and TR can save valuable time for your organization. No matter what its size TR have an internal telephone system to meet the needs of your Company. These systems can incorporate many time saving facilities, among them loudspeaking master instruments. TR equipment is of the highest standard and is backed by an efficient maintenance service—just two of the reasons why Standard-Triumph, and over 30,000 other organizations of all sizes and in all branches of industry have chosen TR Services.



TR are providing Internal Telephone and Time Control services in six Standard-Triumph factories and offices throughout the country.



TR SERVICES FOR EFFICIENT BUSINESS COMMUNICATIONS

TR Services cover all aspects of business communication — internal telephones, internal broadcasting, staff location, attendance and job recording, synchronized clock systems and machine performance recording. TR Security Service include watchman protection, fire alarm and fire detection systems.

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28
BUSINESS

MANAGEMENT AT WORK

LECTRICITY

Puts the Strength into Steel

Prophecies of far-reaching developments in the industrial uses of electricity were characteristic of the speeches at the 13th British **Electrical Power Convention in June.**

tricity Board, R. R. Brown, gave reasons why certain uses were becoming more widespread:

Automation: because of the simplicity with which induction and dielectric heating methods could be fitted into the production line as an integral part of the process.

Metal: 90 per cent of the highgrade brass is now melted by induction heating because individual induction heaters in a large press-forge shop were capable of heating billets at the rate of two tons an hour. In the steel industry the large arc furnace was now established as being economically competitive with the open hearth process. It was attractive because of its flexibility of operation and the stronger and cleaner steel it produced.

Floor-heating: apart from comfort heating, in the making of bricks and concrete blocks it could prevent damage by frost and enable work to continue all the vear round.

In addition, Mr. Brown said that dielectric heating was widely used in the plastics industry for preheating and plasticising material before forming and curving in the press, in the furniture industry for accelerating the setting of synthetic resin glue and in the fish trade for thawing out large frozen blocks of white fish. In all these and many other applications greater speed largest electric steel making plant

Chairman of the Southern Elec- and improvement of output had been the result.

> With development going ahead in all these fields it is not surprising that sales of electricity have increased from 36,000 million units in 1947 to over 100,000 million now and are expected to double again by 1970-and again by 1980. Nor is it surprising that the industry spends over £80 million a year on research, employing more scientists and technicians than any other industry.

An answer to the problem of redundancy

What is a firm to do when the demands of modernization of plant are such that there is no alternative to the redundancy of labour? In this instance the board is deeply conscious that some of the people involved have given long and loyal service to the company and have contributed by their skill to its efficiency and profitability. Over the years the firm has become a social as well as an economic organization and this implies a definite responsibility.

Steel, Peech & Tozer, a branch of the United Steel Companies Ltd., is the firm and it is replacing its 21 open-hearth furnaces by six 110-ton capacity electric arc furnaces, which will give it the world's

That awful tinkling

Winston Electronics Ltd. have developed an equipment to notify the ice-cream approach without man's causing irritation. From an electronic tone generator any of 10,000 pure and undistorted four-note tunes lasting three seconds can be selected. A timing device prevents the vendor from sounding them more than once every three minutes.



GENTS

fire alarms — don't give fire a chance!

Experience counts... Gents have had over sixty years in the fire alarm business and make equipment ranging from simple manually-operated systems complying with the Factory Act to comprehensive detector systems, approved by the Fire Offices' Committee, that give the alarm automatically — day or night.

but will also reduce the labour University College, Londonderry, needed by over 1,000 men.

University College, Londonderry, runs a full-time, two-year residen-

Answer to the problem: older men will be retired and actual redundancy will, as far as possible, be confined to temporary employees. For established, regular employees' openings will be found in other departments as they become available: but for the most part these will be less highly paid jobs and reduction of earnings seems inevitable. The loss may amount to between £3 and £6 a week. To compensate these men an ex gratia payment will be made based upon actual loss of earnings. years of service and age. The maximum payment for each man will be £300. The question has been discussed with the Iron and Steel Confederation.

How government can help

Firms wondering whether it is worth while training young men who may trot off as soon as they are qualified to other firms who do not spend money on the necessary facilities can look with longing towards Northern Ireland. There the Government lifts much of this burden from industry.

Last year the Ministry of Education there awarded 215 trade scholarships, totalling £28,000, enabling young men to follow fulltime courses connected with their trades. For firms building up a labour force the Ministry of Labour provides training centres or offers financial assistance if they are running training programmes. The technical schools are in close liaison with local industry. For instance, Larne Technical College has a fully equipped and instrumented turbine room, worth £20,000, for the instruction of young workers entering the A.E.I. turbine factory in the neighbour-

At Ballymoney, Co. Antrim, at the request of Corfields Ltd., who produce precision cameras, the technical college provides a special course for new recruits. Maple University College, Londonderry, runs a full-time, two-year residential course in management, while Belfast College of Technology provides three and five year part-time courses.

So it can be done!

Exporting can mean rapid growth

Not many years ago the Addressograph - Multigraph C o m p a n y found their business expanding so rapidly that they built a new and very fine factory at Hemel Hempstead. By 1959 the expansion was such that another 30,000 square feet were added. This year the growth has necessitated still another extension of offices and factory space. Work that will cost £600,000 is now in progress.

Exports are the secret. In the past 12 months alone export sales have risen by 25 per cent. At times they have even exceeded home sales. Addressograph machines are responsible for 60 per cent of the firm's exports but the Multilith Model 1250 offset duplicator also has its share besides others of its products.

Prize-givings for apprentices

Information in the Business postbag during the past few weeks suggests that apprentices are receiving more and more incentives to high quality work through special prizes and awards. Here are some instances that have come to notice.

Raleigh Industries Limited, Nottingham, recently had their 16th annual prizegiving. Awards ranged from £2 to those who had passed the examinations for the Royal Society of Arts Certificate—Grade I, and the Ordinary National Certificate—Ist year, to £15 to those who had obtained the Higher National Certificate. A special award was given to a successful candidate for the Associateship of the Institute of Metallurgists.

At the English Electric works in Bradford a patternmaking apprentice has been selected by the City and Guilds London Institute as a member of the British team for the International Apprentice competition at Duisberg, Germany.

The Michelin Tyre Co. Ltd. announces that three of its appren-



The result was not published when the Mayor of Burton submitted to aptitude tests for shoe-making on the Pirelli Stand at the Commonwealth Technical Training Week Exhibition.

tices have won places in the British team for the International Apprentice competition at Duisberg.

British Oxygen arranged an exchange visit between two 20-yearold apprentices, one from Enfield, Middlesex, and the other from Wellington, New Zealand, as part of their contribution to the Commonwealth Technical Training Week.

The Plessey Co. Ltd., Ilford, Essex, last month awarded Savings Certificates worth altogether 165 guineas to the best craft, technical and student apprentices of each of five years. The Mayor of Ilford presented the silver rose bowl, silver plaque and 25 guineas-worth of Savings Certificates to the best Plessey apprentice of the year.

A library of computer programmes

"It is no use," said a harassed research director, "trying to teach computer programming to anybody over the age of 30." Perhaps that

and business routines for users of their 2.000 electronic data processing systems. This, it is claimed, should eliminate a great deal of repetitive coding.

A business routine currently available on the library tape converts a binary number to its binary-coded decimal equivalent. One of the scientific routines computes the sine or cosine of a scaled angle in fixed-point, single precision arithmetic.

cription includes a definition of the routine, the programme instructions, and a block diagram of the process.

Towards safer travelling

At least two firms are taking seriously the perennial problem of the roads. Quickfit & Quartz Ltd. of Stone, Staffordshire, are fitting all the vehicles in their fleet, both commercial and passenger, with

Is your office O.O.D.?-Turn to p. 89

individual business or scientific needs are available on the library tape. Routines, for example, can be added or deleted from the tape as required. This library tape feature ensures maximum coverage future expansion to meet the customer's requirements.

library tape containing scientific routine in the library. This des-

Numerous other routines to meet safety harness. The company is also preparing to obtain at the reduced prices made possible by bulk purchase, diagonal type safety belts for employees for use in their private cars.

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Advertiser's Announcement

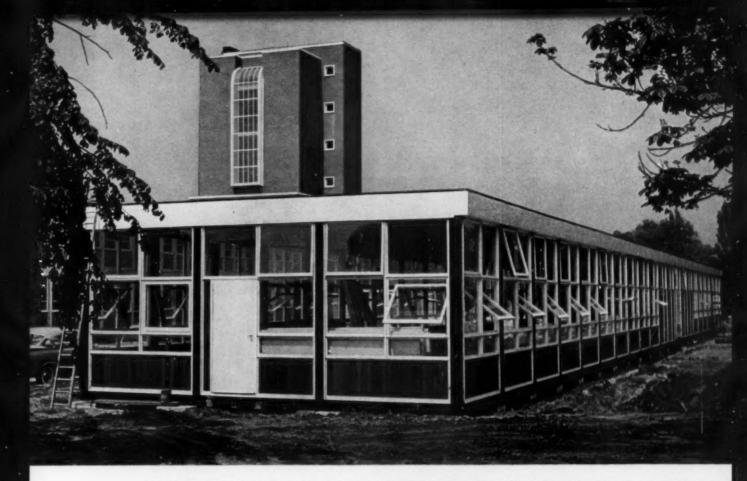
Practice certainly does not make perfect in all things, but it probably does get down one's handicap.

Obviously, in the well run mediumsized or smaller businesses, where the personnel turnover (horrible phrase) at executive level is low, the task of finding senior executives is one in which the Chairman, Managing Director and Company Secretary is not practised.

When, for example, it is necessary to replace 'old Smith,' who has been with the Company for thirty years, many procedures have grown up largely round his way of doing things. What often happens as a result is that an advertisement is drawn for a replacement for 'old Smith' but owing to the many years of his employment and the fact that he has grown up with the firm, an exact replacement may not be the most economical course, and at this point the advice of a skilled recruitment consultant, who knows the market, is often valuable.

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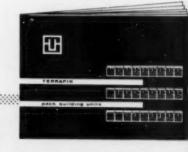
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He turned to industry from the land



Now general manager of the Dunlop Sports Group, 50-year-old Jack Morton began life in agriculture. His father was a landowner and farmer in Cambridgeshire and his natural destiny would have been to carry on the tradition. In between ordering for lunch I listened with interest while he told me of his undiminished affection for the land.

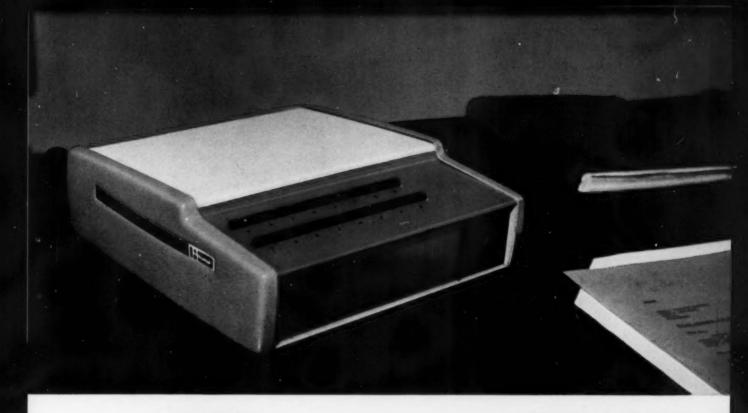
This he now satisfies with a two-and-a-half acre garden in Surrey, where he spends most of his leisure time. As a young man he was devoted to the soil and the animals. But during the 10 years leading up to the war agriculture was in the doldrums. He could see no future in farming for an enterprising man. Since he had always been especially fascinated by the business and administrative side he decided upon a career in industry, applied for a job with Dunlops and got it. This was the beginning of a steady rise up the management ladder.

Now Mr. Morton is responsible for a works at Redditch, making fishing tackle; another at Speke, near Liverpool, that manufactures golf and tennis equipment; one at Waltham Abbey specializing in tennis rackets and one in Scotland producing golf balls. This group accounts for one-quarter of the total British exports of sports equipment, sending £1,250,000's worth a year to 150 countries.

First, Mr. Morton had to learn the profession of management and this he did in the footwear side of Dunlop's activities, buying and selling and administering on the lowest rungs. He still believes this to be the best way of learning. The management recruit he prefers is the flexible young fellow just out of school who will put on dungarees and go through the mill while keeping his eyes on a high ambition. He praises the training given in the public schools that enables the candidate for management to be popular with those among whom he is working while still retaining his personal dignity. He is respected as well as liked. This facility for mixing with people of all types is the beginning of leadership.

Respect and liking are important from another standpoint. The manager must draw out the respect of his men as well as their liking, but he also should both respect and like them. "Employees are not 'hands' or 'bods' or 'operatives'," Mr. Morton said, "they are men and women. Talk about them in those terms and you will soon begin thinking of them as if they were robots. This is degrading both to you and to them."

One way of winning respect is to give decisions firmly and without delay. To be able to do this you must be thoroughly well informed. Decision making comes much easier to the man with the main facts at his finger-tips. Besides this it is important to develop principles of action so that the facts are organized in relation to the question at issue as soon as a decision is demanded. For instance: "I never make changes in anything that is doing well unless the arguments for it are overwhelming." During the course of a day a manager may have to give many decisions on matters of importance. Principles of that kind, together with a clear idea of objectives, will enable him to maintain order and consistency among them. Then people who have to





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Pacemakers

carry out the decisions know where they stand. They will respect the manager because he is treating them with respect.

When the Anglo-Iranian Oil Company gained a new recruit in 1946, fresh from the army demob centre and still in uniform, they could have barely realized that they had secured a prospective managing director. Now, after a relatively short space of time. John Harding Davies, M.B.E.—the one-time Com-

Accountant with a flair for marketing



bined Operations specialist-is back in command. He takes over the position of managing director of Shell-Mex and B.P. early this month on the retirement of C. M. Vignoles, C.B.E.

During the late 'thirties Davies qualified as an accountant and spent the early part of his career on the Continent. But it wasn't until his release from military service that he realized the need for a fresh approach to the business world. While claiming that his accountancy training has been a valuable asset his rapid climb to success with the B.P. group has had a marketing bias.

In his work he is said to be particularly keen on the marketing aspects of business and has strong beliefs about attention and thoughtful service to the consumer. Davies is an advocate of modern techniques and has no intention of remaining deskbound. He has said that he intends keeping up to date by spending more time in the field—maintaining that the company can run whether he is behind his desk END or not.

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O & M TO BRITISH BUSINESS

BUSINESS



BUSINESSMAN'S LAWYER

Redress against bad payers

"T HAS been our custom for some years now," writes a reader, "to charge interest at 6 per cent per annum on accounts which are three months overdue for payment, and this is clearly stated at the bottom of our invoices and statements. It has been suggested to us that we have, in fact, no legal right to charge this interest, and that there is no obligation on the part of the debtor to pay it, should he settle his account voluntarily or, alternatively, be sued for payment. Many of our customers are notoriously slow payers and use their merchant as a cheap way of getting the use of money. We have always felt that the 6 per cent charge was some recompense for the facility. But we obviously cannot go on making it if it is unlawful. Is it?"

The essence of the question is—if you aren't paid when you should be, can you charge interest? And the essence of the answer is—you can only do so if there is an agreement, express or implied, between you and your customer which allows you to do so.

Express agreement is simple to make and to understand. If you want to charge 6 per cent on overdue accounts, then you should tell your customer that this is one of the terms upon which you trade. Just as you specify a price, a delivery date, a period within which payment must be made . . . so you can specify an interest charge if payment is late.

But it's much too late to attempt to do this in an invoice or a statement. Terms printed on these documents are no part of the contractual agreement. That was concluded days, weeks or even months before these documents were drawn up or received. Businessmen have a peculiar idea that they can introduce new terms into an agreement by printing them on demands for payment, confirmation slips, delivery notes and the like. They can't.

On the other hand, if you have traded for a long time with a particular firm or individual and you have brought your interest charge on late payments to his notice, it may be that you will have his implied agreement to pay them. True, the first time that he's late in payment and you bang on the 6 per cent, he can thumb his nose at you. But if he pays it and still carries on trading with you, a Court might be prepared to accept that he knew of your system and had consented to it. In that case, the fact that he had not expressly agreed wouldn't matter. An implication will do.

"Unless a different intention appears from the terms of the contract," says s.10 of the Sale of Goods Act, 1893, "stipulations as to time of payment are not deemed to be of the essence of the contract of sale." So if the customer owes money for some goods which you have sold him, then even if you have stipulated a certain time for payment, this term will not be "of the essence" of the agreement, unless you have expressly made it so.

It follows from this that in contracts of this kind you most certainly cannot charge interest if payment is late. It may be a breach of contract, but it isn't normally even an essential one.

If the time comes that you have to sue for your money, the situation as to interest changes. Two Acts of Parliament may come to your rescue.

First, s.3 of the Law Reform (Miscellaneous Provisions) Act, 1934 says that "In any proceedings tried in any Court of Record for the recovery of any debt or damages, the Court may, if it thinks fit, order that there shall be included in the sum for which judgment is given interest at such rate as it thinks fit on the whole or any part of the debt or damages for the whole or any part of the period between the date when the cause of action arose and the date of the judgment."

The High Court and local County Court are Courts of Record. So if you sue for your money and win, the Judge will be able to order that interest be paid on the debt concerned from the time the debt arose until the date of judgment—or any part of that time which the Judge considers to be just.

In practice, if the Court takes the view that you have been wrongfully and unnecessarily deprived of your money, it may well grant you interest. Usually, this will be at 4 per cent. But it doesn't have to be. The Act gives the Court a complete discretion.

The second Act which may help you applies where cheques bounce. S.57 of the Bills of Exchange Act, 1882, provides that "The holder may recover from any party liable on the bill, and the drawer who has been held to pay the bill may recover from the acceptor, and an indorser who has been compelled to pay the bill may recover from the acceptor or from the drawer or from a prior indorser . . . (a) the amount of the bill, (b) interest thereon from the time of presentment for payment if the bill is payable on demand, and from the maturity of the bill in any other case . . . " END

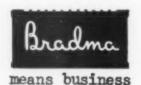


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Two Steps Up, Two Steps Down

by George Copeman

executive must know who is and who are his subordinates. He must be directly answerable to his boss and his subordinates must be directly answerable to him.

An important rule of this system is that executives and other employees must not step out of line. If they have a complaint, they must not in the first instance take it direct to a senior executive who is two steps up. They must take it to their immediate superior. Equally, an executive who wishes to admonish a subordinate two steps down the ladder, should not in the first instance do it directly. He should admonish his immediate subordinate who is responsible for the man at fault, and the admonition should be passed on.

There are, however, circumstances when the normal rule should be broken. If, for example, a junior man makes a severe breach in accepted discipline, it can be salutary to 'carpet' him before a superior who is two steps up, whom he normally does not see and whose admonition therefore carries all the additional weight of higher authority.

Equally, when a junior subordinate has a strong personal grievance, he should be allowed access, via his immediate superior, to the man two steps up the ladder, whose attention to his personal grievance will carry all the more respect because it is given by a higher executive whom he normally does not see.

On social occasions the top man can talk to the junior privately and personally over a drink. On other

OME sort of hierarchy is occasions an executive should not present. All these are valuable essential to industry. Each normally have dealings with a subordinate two steps down, unless the intermediate executive is present. On those occasions when he has to deal on his own with the man two steps down, clear arrangements should be made to keep the intermediate man informed.

> Everyone in the industrial hierarchy feels at times 'cribbed, cabined and confined' by the normal rule that he must not by-pass the next man in line. So in addition to the sort of cases just mentioned, where this rule should be deliberately ignored, the hierarchial system should be sufficiently flexible to allow executives periodically to see those who are further up or down the ladder. There are, for example, project committees on which it is possible for people of three levels of authority to sit. There are periodic conferences such as sales conferences when at least three levels of authority will be

links in the executive chain.

Why is it so important that members of the industrial hierarchy should occasionally see the man two steps up or down? Because every executive is a link in the chain of communication, and being human, inevitably colours the communications that pass through him in either direction. Every person on the ladder of authority becomes accustomed to the habits and attitudes of those who are immediately above and below, and so tends to feel confined by the fact that all messages bear the personality of the man passing them on.

To see someone else for a change, means to glimpse another view of the same matters. It may be a view which is no closer to reality, which contains no new or different information, but will nevertheless feel different. It will tend to give a sense of satisfaction and avoid the build-up of frustration.

The Unwelcome Visitor

an unwelcome visitor, send him a rude message, and miss an opportunity to buy materials or equipment that would serve your needs very well.

If you have too many callers and cannot see them, you need a firm but very polite drill for brushing them off, while at the same time learning the purpose of their visit.

The receptionist or your secretary should see a caller and explain that you are heavily engaged, are his advantage.

It is easy to be annoyed with very sorry that you cannot come down to see him, and would he like to leave anything or write to you? The man may firmly persist in trying to see you, but the receptionist or secretary should firmly repeat, if necessary more than once, her invitation for him to leave something or write. She should say that and nothing more. because anything else she may say, in all innocence, will be picked up by a clever salesman and used to

Patriotism with Profit



by Tony Burgess

BRITAIN'S share of world trade fell from 25 to 16 per cent in the last decade

LARGE FIRMS on the whole are pulling their weight in the attempt to redress this dangerous position —40 such now contribute some 30 per cent of our total exports

SMALL FIRMS also have a vital part to play in underpinning the nation's economy—with excellent prospects for themselves. Rarely has there been such an opportunity to combine patriotism with profit THIS is not another exhortation to you as a British manufacturer to export for all you are worth. If by now you are not convinced that our standard of living, and perhaps our very way of life, are utterly dependent on our ability as a nation to increase our share of world trade, you never will be.

But no one can expect a manufacturer, however high his sense of patriotism, to mount an export campaign unless he is going to make a profit from the venture. And there is certainly no evidence to suggest, Mr. Macmillan notwithstanding, that exporting is more of a joyride than any other business operation. Nevertheless, there are very many firms, particularly among the small and medium sized ones, who could enter the export market with beneficial effect to their profit and loss accounts, but who for one reason or another have dismissed the idea.

Maybe your firm has gone thoroughly into the question and has come to the valid conclusion that for you exporting would not be an economic proposition. This decision, if rationally arrived at, nobody may challenge. But were all the avenues really explored, or were you put off, as so many others have been, by the first difficulty, the first unfamiliar process which you encountered? Or maybe your firm is one of those which is doing all right on the home market, and which has never given the possibility of becoming an exporter really serious thought.

If you belong to the first category, then you know your own business and no-one is entitled to tell you how to run it. But if you belong to the second or third groups, perhaps another look at the situation might reveal prospects of worthwhile profits for you, and some expert advice might put those seemingly insurmountable problems into perspective.

The purpose of this article is to indicate some of the ways in which even the smallest concern can become an exporter, and if not exactly have fun in the process, at least make a profit.

Before we go on to discuss ways and means, however, much light can be thrown on the problem by an examination of the reasons why most small firms are not already exporting.

Exporting is basically a selling problem. The outcome of a successful exporting operation is after all a sale, but to a foreign customer, not a fellow national. And the small firm, however efficient it may be in the manufacturing sphere, is usually weak on selling, even in the home market.

The curse of prosperity

To a businessman as a manufacturer, it does not matter where his products are sold, so long as they are sold. To the businessman as a seller, there is obviously a very strong tendency to seil in whatever market poses the least problems. Unfortunately, from a national point of view, this is invariably found at home.

The booming home market of post-war years has been in some ways a curse in disguise because it has removed from manufacturers are used to giving home customers. If he can't get them from you, he certainly will from a German, an American or an Italian. So you are

the necessity of going outside these shores to sell the output of their factories. It is no coincidence that Germany, with internal purchasing power at rock bottom during the immediatee post-war years, should now be one of the world's leading exporters.

So exporting poses marketing problems, as well as the obvious administrative ones, and while you can sell everything you can make outside your own front door, why should you get involved in a process which abounds in pitfalls? This is a perfectly reasonable reaction, except that the stage has now been reached when our ability to manufacture may be endangered by our inability to pay for essential imported raw materials. To import the materials we need to keep producing, we must export in order to be able to pay for them.

Foreigners are tricky

Nevertheless, to see exporting as a special aspect of marketing does serve to clear the air somewhat. Exporting is not a sphere of activity completely divorced from all other commercial processes. It is merely a branch of selling, albeit a particularly difficult one.

Like all marketing operations exporting involves a lot of separate and often complex problems. There is the business of knowing exactly what the customer wants, what price he is prepared to pay, how he wants the goods packaged and delivered. To answer these riddles requires market research of some kind or another-be it just a personal visit to the country concerned, or a full-scale market investigation by a specialized agency. Then there is the problem of setting up a selling organization in the country concerned. Do you send out your own men, appoint an agent, or what? Exports are often much longer in transit than goods sold at home, on top of which a foreign buyer often expects longer credit terms than you are used to giving home customers. If he can't get them from you, he certainly will from a German, an

faced with difficulties of finance. Then there is the documentation....

At this stage the average small manufacturer throws up his hands in despair and forgets all about the idea. How can he expect to have the resources to tackle problems of this complexity? And just for good measure he'll probably throw in some remarks about foreigners being tricky people to do business with anyway.

Quite correct. He just hasn't the means to tackle this sort of problem himself. And foreigners are 'tricky.' They expect delivery dates to be kept, and they're always looking for the keenest terms. But almost every firm uses the services of a whole host of contractors with specialized equipment and specialized know-how to do jobs which it does not pay them to do themselves. This extends from having the chimneys swept to having their advertisements written. So why don't more small firms call in specialists to do their exporting for them?

The answer in most cases is lack of knowledge, and to help rectify this is one of the objects of this article. The other reason usually is fear of the cost. But specialists in handling other people's exports can do it more cheaply than the individual firm in most cases because they have a great deal of knowledge about export conditions, and because they can spread their overheads.

Selling to primitive markets

What services exist, then, for taking the drudgery and risk out of exporting for the small manufacturer? To begin with there is the traditional merchant house which trades on its own account in various foreign parts. This type of institution will buy the goods from you if it thinks that it has a good chance of being able to re-sell them at a profit.

Merchant houses in this sense tend to trade in the more 'primitive' markets, so if you think there is an outlet for your goods in, say, Africa, South East Asia, or parts of South America, this may be the answer. These companies are always pleased to discuss possibilities with manufacturers, but they never buy on chance. Unless they are certain that your goods will sell, they won't make an offer.

The second most important group of companies able and willing to help the small exporter are the confirming houses. There are about six really large concerns in this category in the City of London. and hundreds of smaller ones. Basically the confirming house, often just called the 'shipper,' represents overseas importing companies. The foreign importer is their client, and they act as buying agents. They pass on orders from overseas buyers to British manufacturers, and make themselves responsible for payment to the manufacturer when the goods are shipped. Shipping and insurance are usually arranged by the confirming house, and distribution is left in the hands of the importer.

But this type of institution is far more than just an agent for foreign buyers. It is a very efficient liaison officer between British producers and overseas importers. Normally the sales impetus comes from the importers, but it is up to the confirming house to know in advance what goods are available in this country, and at what price. It must be, therefore, in very close touch with manufacturers at all times, and is always happy to be approached by firms with lines which they think might have sales potential in overseas markets.

Exporting for nothing

For the small manufacturer, the services of a confirming house have two very great advantages. In the first place the exporter's responsibility ends at the quay-side in this country. He gets his money as soon as he has delivered the goods to the ship, and there are no problems of working capital being tied up for long periods. For the same reason, the bête noire of complex documentation is avoided by the manufacturer. But most important of all, the confirming house makes no charge to the manufacturer. Their commission



is paid by their employers, the overseas importer. Likewise freight charges and insurance once the goods have left this country are the responsibility of the buyer.

One problem which often worries the very small would-be exporter is that of guaranteeing continuity of supply. Confirming houses, unlike some other export agencies, are often willing to handle 'job lots' of manufactured goods. So their services can be of particular value to the firm which has the occasional batch of goods which it would like to dispose of abroad, but which does not want to commit itself to a regular order.

From the manufacturer's point of view there would seem to be disadvantages in the confirming house system, arising from the fact that the intermediary is working for the buyer, not the seller. But in practice these disadvantages are more apparent than real. The confirming house can often make a very good assessment of a product's marketability, and advise the manufacturer on modifications that would make it readily acceptable in a certain market. At the very least, the confirming house is a first-class listening post, also combining the functions of a market research agency. It costs a manufacturer nothing to approach a confirming house about the potential market for his goods. And if the house finds him a market, it still costs him nothing. . . .

Where the merchant companies tend to operate mainly in primitive markets, the confirming houses tend to do business in the more highly developed markets. So if you are hoping to sell in places like Japan, The celebrated slogan 'Exporting is Fun' may yet rank as the gaff of the decade. But while demanding a great deal of hard work, exporting can certainly be good business

South Africa, the Commonwealth countries or Europe, a confirming house would be the best place to go for advice. Confirming houses, incidentally, depending as they do on good local contacts, tend to specialize in certain areas of the world.

A new type of service is just beginning to appear on the export scene. This is the factor, an institution which grew up originally in the American home market, but which has now been transplanted to this country and operates on an international scale.

How to sell your debts

The factor can truly be said to take all the heartache out of the exporting process for the manufacturer. In one operation he relieves the producer of the complete burden of finance, ledgering, credit control, bad debt risk, and debt collection connected with his sales.

The system whereby this is achieved is basically very simple. The factor purchases from the manufacturer his debts virtually as they arise. Except in the case of a claim by a buyer against the quality of the goods supplied, the debts are bought outright with no comeback to the supplier.

A manufacturer can go to the factor with a line which he hopes to export. The factor will advise him on its marketability, and if he thinks that the goods stand a reasonable chance in the particular market, he will attempt to find an agent to handle the line in that market. Like the confirming house, the factor's stock-in-trade is a vast amount of knowledge about conditions in the market in which he

operates, and sound contacts with local buyers and agents.

The first stage of the factor's service is at an end when an agent has been found to promote the manufacturer's goods in the chosen market. From then on the factor takes over financial responsibility for all goods which the manufacturer sends to that particular agent. As soon as a consignment is shipped, the manufacturer is paid by the factor, and the latter takes over the debt.

The advantages of a factor's services to the small producer are considerable. In the first place the factor supplies the basic market information, and then, if the goods in question have sales potential in that market, he puts the producer in touch with a reliable agent. Once the manufacturer and the agent have come to an agreement, the factor provides the whole financial backing to the undertaking. In this way the manufacturer is relieved of the necessity of financing his customer, often a major problem in export markets for manufacturers with limited capital.

Since the factor works directly for the manufacturer, it is the latter who pays for the service. But charges are modest in relation to the services provided. The actual cost is based on the current bank rate, plus one or two per cent, depending on the risks involved in the particular transaction. The factor, unlike the confirming house, in normally only interested in business which is likely to be continuous. So the manufacturer would be expected to guarantee continuity of supply.

Factoring as a service is very new indeed to this country, and at the moment there is only one firm in operation. Since factoring can only be effective in the most sophisticated markets, this concern deals only with the United States and Canada at the present time. But there are plans to extend the service at a later date to the Common Market countries.

One other service available to the manufacturer thinking of entering export markets for the first time must be mentioned. This is the information and advice disseminated by the Board of Trade. From a considerable mass of infor-

mation on conditions in overseas markets, prospects for different types of goods, knowledge of import regulations in foreign countries, and of tastes, customs and trading methods, they claim to be able to advise on suitable markets for a given product. A short list of approved agents who are capable of handling the particular commodity in that market will also be supplied. For businessmen visiting foreign countries they will advise on itineraries, and arrange introductions.

No substitute for travel

Although the Board of Trade's export services are exceptionally efficient and well-informed for a Government body, and every attempt is genuinely made to tailor advice to individual requirements, the very nature of the world-wide coverage offered does mean that in the final analysis the service tends to be just a little impersonal. Likewise, being an official body, they will not make a definite recommendation as to the choice of agent or confirming house. The inquirer is still left to make his final choice blind from a list. Those exporters to whom I have spoken who used the Board's services were almost unanimously of the opinion that this was an excellent source of background material on a given market, but that you needed to look elsewhere for advice on the final

Mention should also be made at

this point of the Export Credit Guarantee Department, a Government organization which underwrites the financial risks of exporting operations, and assists exporters in extending long-term credit to customers.

Two final words of advice to would-be exporters: firstly, remember that exporting is only a selling operation.

As in the home market, if you are making the right goods at the right price, you will have no real difficulty disposing of them.

Secondly, whatever way you decide to go about making your first contacts in your chosen market, even if it is one of the methods described above which takes virtually all the work except actually making the goods off your shoulders, there is no substitute in the long run for a personal visit. However good the agent who is selling your goods, he will appreciate their full potentialities and their true quality far more readily for having it explained to him personally by the man who makes them.

The letter hasn't yet been written that is half as effective as the same subject covered in a face-to-face conversation. And the only way of discovering what the customer really wants is to go and talk to him.

Who knows, when you visit your agent, he might even take you to a local night club, and this is the nearest exporting is ever likely to get to being fun....

Can we put you in touch?

For reasons of space it has not been possible to mention individual exporting agencies by name in this article. But BUSINESS would be glad to put readers in touch with firms who might be able to help them with their export problems

Modernity Comes to

Working in the Potteries is more attractive now than it was when these kilns were built



Grips with Tradition

High quality but old-fashioned craftsmanship and small, often inefficient, family firms are deeply entrenched in the Potteries. They fight a bitter rearguard action against the demands of modern management. Little by little, progressive men are finding their way through the muddle

T is easy to be sentimental about the pottery industry. It is an industry burdened by tradition, shackled by nepotism, and retarded by out-dated methods of production. It employs a higher proportion of artists and craftsmen than any other industry. And its products are often creations of great beauty.

Now add to this the drama of small family firms going broke because of increased costs and the consolidating of bigger companies into combines and groups. Consider too the fact that this craft industry is being forced towards mass production and greater efficiency—and it is easy to see that the present period will be rated amongst the most momentous of the industry's history.

This present struggle between the old and the new is the key to the future of this ancient industry. While there will always be a market for fine earthenware and china, the eventual outcome must be greater mechanization and some sacrifice of quality.

Many changes have taken place in this direction during the last 10 years. Companies have gone public to raise more money for capital investment, and management consultants have been called in to wave the organizational wand. Small companies unable to keep pace have been lost in mergers and take-overs.

"In another 10 years," I was told, "a quarter of the firms left will have sold out to the big boys."

But, lamentable though the passing of tradition and of craftsmanship may be, the new order presents managements with possibilities as well as with problems. Some of the drawbacks associated with an ancient industry are disappearing. Working in the Potteries is altogether more attractive now than it was a few years ago. Hanley is visible from Stoke because the air is purer and cleaner. The incidence of pneumoconiosis has fallen and, although the potter's wages are still among the lowest in the country, they are better than they were. Living standards are rising all the time.

A marriage of methods

Now, as always, one of the most progressive firms in the industry, Wedgwoods have turned the new idea to their own advantage. They lead the way in marrying modern conditions and modern methods of production to high quality craftsmanship. Their advanced thinking shows itself not only in the efficiency of their internal organization and their methods of production, but also in the attractive lay-out of their factory estate at Barlaston. Here

they have utilized the best available experience in training, work study and sales promotion.

Result—a 70% increase in productivity in 10 years. Their name is known throughout the world not only because of the excellence of their product but also because of their awareness of the value of good relationships between management employees and the wider public.

As in other small firm industries the move towards consolidation is giving rise to influential groups. Probably the largest is the Lawley Group Ltd., employing some 3,000 people in its Ridgway and Swinnerton factories. So involved has been the development of this group that the managing director, Jack Halsall, and the secretary, Kenneth Leek, were unable to tell me off the cuff exactly how many individual pottery businesses had been merged to make up the group in its present form.

Lawleys are the largest producers of table ware in the industry, accounting for 8 per cent of total output and turning over between £3 and £3½ million. All their potteries have undergone modernization since the war.

"But," says Mr. Halsall, "these mechanical methods will only satisfy up to a point. We are still very dependent upon craftsmen. On the average each company makes five shapes, each shape having a hundred separate items. It is all very well for management consultants to tell us to reduce variety—they don't have to sell the stuff." Yet Lawleys have succeeded in doing that very thing. In one of their factories only seven items are made.

Management is missing

Indeed, most of the troubles now facing the industry can be traced directly to the lackadaisical and short-sighted management methods of the past. Poor wages have driven away the youth of the district to greener pastures. Some have preferred remaining in the Services to returning to Stoke. Working conditions have been unhealthy.

Two executives volunteered that the development of management in the industry was virtually non-existent. Because most firms have been family-owned for generations, senior posts have been filled by friends and relatives, sometimes without much regard to experience or ability. On the lower levels the procedure has often been for the best man from the workshop to be selected, told he was a manager and then left to fend for himself.

Both these executives belonged to the Pottery Managers Association. This, be it noted, is not an organization devoted to the development of management but to the dissemination of technical information. Nowhere, it seems, is there a concerted effort to teach management skills.

Yet it must be admitted that no easy solution to the problems confronting the industry suggest themselves. For example, china has always been retailed cheaply and customers have been allowed by the trade to replace breakages with odd cups and saucers to make up the set. It is hardly surprising that net profits are small! Then, the cost of modernization is greater than some of the smaller firms dare to contemplate. The gas and electric tunnel kilns that are supplanting the oldfashioned bottle kilns cost £15,000. They take up a large amount of space-and they demand a large market, too, because they must turn out 13,000 pieces a week to run economically. Small firms cannot cope with such requirements. Nor can they contemplate the expense of the research that would lead to improvement.

Obstacles to progress

Without doubt the biggest factor preventing greater use of automatic techniques is the variety of products. Some £40m. to £50m. worth of pottery is produced every year of which half, or £20m., is exported. The industry maintains that it can only achieve such a high ratio of exports if it keeps up the wide variety of shapes and patterns. But this can only genuinely be true for china which makes up for £10m.

The other £40m. is accounted for by earthenware, tiles, and sanitary ware, all of which can be produced on mass production lines to a high degree.

Unlike other industries, there is an extraordinary lack of information about the Potteries. With one notable exception, hardly any companies have produced brochures about themselves and what they have achieved. For some odd reason even up-to-date figures of the industry's production are kept secret until they appear, two years old, in the national Census of Production.

This lack of communication extends into other areas. Inter-firm comparisons are not practised (unless privately between two companies) nor is productivity per employee known or compared with opposite figures for America or Japan. The representative just quoted believes British pottery firms to be more efficient than those of America. There, he states, "half the industry has been knocked out by Japanese competition."

That American companies are less on the ball does not match with information from other sources, however. Anthony Wade, of George Wade & Sons, whose four factories manufacture earthenware and industrial ceramics, visited a number of American companies. He found that American factories were laid out better and they also had their customers better 'trained.'

For example, an American insulator, comparable to those made by Wade's, would contain holes and specks of foreign matter sufficient in a British firm to consign it to the dustbin. But, argued the Americans, they were making a functional product which is hidden in use. Why should it look pretty?

"I came away thinking they were right," says Wade, "But on reflection I concluded that the only thing British firms can still sell on is quality. This doesn't cost us much because we haven't the huge markets of the States." At the end of every discussion the conclusion is the same: if they lost reputation for quality, they might lose everything.

END

BUSINESS

Gas and electric tunnel kilns are supplanting the old-fashioned bottle kilns



Keeping Tabs on the Stocks by Harry West

Where 20,000 items are kept in the store and there is a turnover of thousands of items a day, an efficient stock control system is

indispensable. This firm has devised time- and money-saving methods

UBERT DEES LTD. of Croydon have solved one problem that confronts practically every firm in this country. That is how to organize and control large and rapidly moving stores. They have achieved this by a combination of improved layout, a new stock control system, and a little psychology.

Dees have to carry an extremely large and diverse stock because they are one of the biggest Ford distributors in the south of England. It totals nearly 20,000 items suitable for cars and commercial vehicles from the 1933 vintage to the latest models. Every day thousands of spares, ranging from engines to washers. leave and enter. Without a good stock control the firm would not know its stock or its requirements. In 1955 the firm established the present system which won them, only two years later, a national Ford award for the best organized store. Today it is hailed as one of the finest systems in the country.

When I visited Dees, I talked first to A. H. Mansell, a director, who was closely connected with the changeover. He told me that the old stores were both out of date and inconvenient for customers. The metal bound books used for stock recording were too heavy for easy handling, took too much room, and wasted too

much time.

As the stores were actually within the garage, customers had to walk around cars to reach the rather small service counter. Few ladies patronized them.

When a new building was under construction, it was decided to kill two birds with one stone. The new counter would open into the very bright and attractive showroom. And the system adopted would be changed. The long new service counter, divided into retail and trade sections each having their own cash and invoice registers, now permits immediate attention and quick service from the stores situated immediately behind where all spares are grouped into associated parts. This is one major departure favoured by Dees from normal stores layout organization. They feel this system enables them to accommodate the expansion which takes place when new models are introduced more easily than the usual method of storing in strict numerical sequence.

The stores area itself is conventional. High fixed racks are normally used, although it has recently been found that slotted angle is useful where variations in size or greater mobility are required. Rapid and safer handling by the operators from the higher wall containers is helped by the use of a ladder which runs on rails fixed in the ceiling and the floor.

These all play their part in efficient storekeeping. But it is only a part. Dees realized at the beginning that a well laid out store would be useless unless backed by efficient stock control. The man who is responsible for keeping the records in order is L. W. Weston, who knows this part of the business like the back of his hand. In his well-ordered office he told me that the whole object of the present organization was speed in identification and ordering, the saving of space, and reliable stocks tying up the minimum of money.

Every item that enters or leaves the stores is recorded on an invoice or garage requisition, a copy of which is passed daily to the stores office for checking. There the details are entered on record cards-one for daily transactions, and one which gives monthly totals up

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Industry Takes to

the Gypsy Life

by Gwilym Jones

happy to stock them if we had regular contacts, but at the moment caravans for use in industry and commerce are in a very early stage of development. It is, though, a market which is doubtless going to increase over the next few years and one on which we are keeping a very close eye." This letter from a leading London dealer, Graham Lewis of Caravan Lewis, published in the May issue of Business, sums up the position of commercial demand and the caravan industry's interest in this part of the trade. Despite the many uses to which caravans can be put, it shows their limited appeal to the business world at the moment. Why is this? What has the industry to offer, and what does the business world require?

In many parts of the world, caravans are used extensively in business, for housing workers, as shops and workshops. Here we

E WOULD be very are much more traditional. The thought of carrying out our business in a caravan instead of a shop or factory, entertaining our friends or having an exhibition in a caravan is still regarded askance by many people. Another reason why industrial demand is not as high as it could be is ignorance of what the caravan industry has to offer. Until these last few years it was associated in the public mind solely with the car trailer or the dreadful looking shacks littering the coast in some places. But the situation is improving.

Manufacturers and dealers are very sensitive to public opinion. They stress good quality and sound design. Manufacturers, dealers and suppliers are now organized in the National Caravan Council, which became a trade association only last year. In addition to the work it carries out on behalf of its members, the high standards agreed upon, it organizes an International

As showrooms, offices, banks and even as executive suites, caravans are gaining in popularity.

Can the makers meet the rising demand?

Caravan Exhibition, to be held this year in September at Olympia. The National Caravan Council can certainly claim to speak for the industry: 98 per cent of manufacturers, 90 per cent of traders, and 85 per cent of suppliers are members. Despite the recent move towards amalgamation and integration of productive units, there are still 80 caravan manufacturers in the country offering around 200 different models.

Practically all manufacturers are agreed that there is a big potential market in the industrial and commercial world for caravans, but at this stage in their development, the special demands usually made by the business world present problems that many of them are not in a position to overcome. This means a vicious circle: special demand means high prices, and high prices limit the demand. Some manufacturers refuse to handle special orders during the peak season; others concentrate on this side of the business. What the manufacturers want to see is the mass production of a standard chassis which can be adapted without too much expense to meet individual requirements. This would allow them to accommodate these requirements in their batch production and pass on the economies of scale to their customers. Some of the largest manufacturers are considering establishing special workshops alongside their line production so that commercials can be built without affecting normal output.

Among the manufacturers who make caravans to order (some will design from the customer's own ideas) are Coventry Steel, Fair-

Normandie. Others, like Sprite. are known for specials suitable for local authority work. Among the kinds which are used (and they have a thriving export market) are a sectional mobile camp including dining rooms, refrigerated vehicles, sleepers, offices and conveniences.

Another model which is popular in the business world is the mobile office shell which can be fitted out as required. It has electric lighting and power points, while the threeinch thick roof and floor make it Another manufacsoundproof. turer has a standard design for a conversion to a snack bar. It seems as if the manufacturers' effort to produce certain standard chassis to meet the special requirements of business has already achieved some

Showroom display on wheels

The idea of using caravans is not new. The watchman's caravan at road works has long been a familiar sight in the British countryside. So too have military caravans and civil engineering workers' offices and quarters. Several big civil engineering contractors recognize the value of having their executives on the job, and lay out proper hardstanding sites for their staff's residential caravans. They have followed this up by having mobile camp facilities which keep up with the gangs of men.

County shows and exhibitions have also used caravans for years, but the one factor has always been their temporary nature. What is different about the present change is that caravans are now being used for entirely new purposes and by entirely different people. As holme, Fairview, Rollalong and these words are being written, a

large caravan is on its way to the north. Its purpose? To enable the bibulous to taste and enjoy Whitbreads tankard bitter. Intensified foreign competition has made Singer Sewing Machine Company counter-attack. They now have two mobile shops that are penetrating parts of the country where previously they had no retail outlets.

Doctors, too, are realizing that caravans can be of more use than a surgery. One Cotswold practitioner finds it easier and cheaper to take his waiting and consulting rooms around with him than to hire a room in each village. How many other practitioners both in county districts and the towns, will follow this example? Local authorities are also becoming major customers of the caravan industry for well equipped units to serve schools, old people, libraries, public health, dental and medical clinics and the growing road programme.

The use of caravans for exhibitions, sales drives and workshops is growing apace. Their advantage is their adaptability. There are no stand erection charges (some exhibitors know what it is like not to have their stand ready in time). They can be fitted up before they leave the factory and when the show is over can be driven away without loss of time. More and more companies are buying caravans for sales campaigns where their goods are demonstrated and

Earlier this year the Marconi instruments mobile demonstration unit, built to their requirements on a standard chassis, completed a tour of Northern Germany and Scandinavia. Radio and television, electronics, gas, electricity, coal, agriculture and cement are only a few of the industries which now have large mobile showrooms and demonstration caravans.

Emergency services have been provided from caravans for years. Mobile banks and offices are well known and so, too, are certain

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RETAILERS: Watch Your **Credit System**

Cycle billing of credit customers maintains a steady flow of revenue. Another point in good retailing is a refined method of controlling costs

HE thirty-day or charge account is overwhelmingly the most extensively used type of credit of the department store customer and, although a relative decline in its popularity, in the face of the newer developments in credit facilities, might be expected, it is in fact, on the increase. There are three points to be borne in mind about charge accounts.

First, an account should be opened personally through a store's finance or credit manager by means of a personal interview. There are still all too many shops which merely require a form to be filled in as the sole formality in opening an account. Such a form may seek information such as traders' references and bankers' references, in addition to details of name and address, and in due course the store would inform the customer that an account had been opened.

Where there is a credit manager. or indeed, the manager or proprietor himself, a pleasanter relationship can be established from the start and it is also easier to

weigh up credentials at an interview than from a signature. In addition, it has been found in practice that many of those asking to have an account do not really want that particular facility. They are really asking for time to pay and this can only be revealed in the course of conversation. Only then can customers be introduced to the form of credit most appropriate for their needs.

Second, charge accounts should be handled, where the sums involved are appreciable, on the basis of cycle billing. This means that the despatch of accounts by the accounts department is spread out over the whole month in accordance with the initial letter of the customer's name, so that customers whose names begin with 'A' receive statements at the beginning of the month and those whose names begin with 'Z' are sent theirs at the end of each

The period of the account remains four weeks, but the steady flow of accounts presented helps to promote a steady flow of money back. The value of such a method can be considerable in reducing the amount of money owed to the store at any one time.

vital to keep a close watch on the mental principle as the buying

by Leonard M. Harris and Ulric M. Spencer

average length of time taken between transactions and payments of accounts. As the retailer makes no charge for an account, he must be tough. A customer who owes a significant amount may become shamefaced and shy, and so far from remaining a good customer tends to avoid the store by taking her small amount of ready money elsewhere.

The customer who complains of being pressed for payment should receive firm treatment and be made fully aware of the conditions attaching to an account. Paying for goods a month after having them would not be tolerated by a bus company offering daily transport in return for immediate cash. Therefore, why should one month's delay seem unreasonable, let alone extortionate, in relation to the settlement of accounts?

It is possible that a more refined method of checking expenses is required, one which will directly control them rather than allowing them to be incurred and subsequently taking corrective action. The proposed expense control Third and most important, it is system is based on the same funda-

This article consists of extracts from Profit and Personality in Retailing, by Leonard M. Harris and Ulric Spencer (Business Publications Ltd. and Batsford), 35s. from bookshops or 36s. 6d. post paid from Business Book Centre, Mercury House, 109-119 Waterloo Road, London, S.E.1.

an estimate of the sales likely to be over. made and, therefore, of the buying power that would be required after taking into consideration the opening stock and the desired closing stock. Actual sales figures were then introduced as the year went by to correct the estimate of the available buying power. In dealing with expenses, the same principle is adopted, but with a different controlling factor.

There is obviously no point in using the volume of turnover for this, as it would give no indication of whether or not a proper rate of gross profit were being achieved. The controlling factor must be the gross margin itself, in monetary terms. Therefore, in installing this system a retailer must know, at least every month, his realized gross margin on sales. It may be pertinent to suggest to those who do not have a regular record of this, that it is by no means as complicated to derive it as some may fear.

Briefly, it is a matter of attaching a selling slip to each incoming invoice, marking on it the selling price which will hence show the anticipated gross margin. variations from the marked price must also be recorded, as these will affect the realized gross margin. Starting with estimated expenses and estimated gross margin for each month of the year, and deciding on the desired net profit, as consisting of two parts. The it is possible to arrive at this final net profit by taking the following tage figure added to the cost price

control system. This consists of steps, as illustrated in the table of each article and called the gross

	£
From the estimated ex-	
penses for the month	3,150
Deduct the actual expenses	3,350
+	200
From the total estimated	
annual expenses	45,000
Deduct the actual ex-	
penses for the month	3,350
	£41.650

From the estimated gross	
margin for the month	3,810
Deduct the actual gross	
margin	4,110

Add	this	to	rer	nair	ing	
balan	ce of	expe	nses	for	the	
year	***			***	***	41,650

This gives the revised expense budget for the remainder of the year ... £41,950

Unit Cost Accountancy:

This procedure should repeated each month except that in all months after the first, actual expenses should be deducted from the revised expense budget remaining at the end of the previous month

The method of computing net profit may briefly be outlined again first derives from a buyer's percen-

margin. The second is the management's efforts to control the expenses of the business in such a way as to ensure that the sum realized by the gross margin on all the store's sales will be sufficient to cover the expenses and leave a surplus as net profit. The system has worked very well for many years, in spite of occasionally providing some shocks for management. Broadly speaking, retailers have found that an average markup of, say 50 per cent on cost or 33} per cent on returns does preduce, in monetary terms, an adequate net profit. This is not to imply that this rate of profit is universally obtained; it is used purely for illustration.

There is a fundamental looseness about the retailer's method of pricing which has survived for so long. Rather than say that because a refrigerator has cost £100 it should be sold for £150, it is preferable to assess as accurately as possible what, in fact, it has cost to offer and render the services necessary for selling the machine.

How far does the average retailer realize that, broadly speaking it costs just as much to sell an inexpensive article as it does to sell an expensive one?

This unit cost accountancy approach starts by saying "I know exactly how much it costs me to run my business. Tomorrow morning I am going to sell a hat. What proportion, in money terms, of my total expenses should that particular transaction bear?" It will be realized at once that by starting at the other end the total expenses of the business are broken down and apportioned to the individual transaction, rather than the opposite method of building up the total expenses from the single sale. END



José Maria Tico, the West End furrier, of South Audley Street, agrees that it costs just as much to sell a coat at £75 as one worth £3.000

by Clifford O. Rhodes



From Log Cabins to Prefabricated Factories WHEN Vic Hallam Limited was formed as a private



HEN Vic Hallam Limited was formed as a private company in 1935 it had an annual turnover of £10,000. Now it has a turnover of £2½ million, and over a thousand employees on the payroll. From the manufacture of a small type of domestic and agricultural structure of timber it has moved forward to the large-scale building of prefabricated two-storey schools and factories.

During the couple of days I spent in the Nottingham factory of the firm, some of the secrets of this impressive growth were very evident. One of them, unquestionably, is the mixture of temperaments among the three founder directors, the brothers Vic and Jack Hallam and Ted Pilkington. The visionary and idealist, dreaming up great potentialities out of apparently unpromising circumstances, has for more than a quarter of a century worked hand

Only a handful of men are needed for the actual building process

BUSINESS



This is the story of a firm's growth during a quarter of a century. It is a record of vision and practical enterprise seeking opportunities and making the most of them

in glove with the down-to-earth, practical man of affairs. The partnership has been happy and productive.

But there have been other factors in the firm's growth besides the personal. What is particularly noticeable is that it has not continuous and unbroken line of evolution but has gone forward with a series of leaps followed by periods of consolidation. At times the policy-makers must have felt that their leaps were taken in the dark; yet if good luck has played a part, the ability to discern and exploit an opportunity has been much more important.

During the war and immediately afterwards timber licensing diverted development out of its natural channels. The company was engaged in putting up army camps and making bomb and shell cases and ammunition boxes. Licensing did not finally end until 1953, which meant that expansion depended in large measure on securing Government contracts. Opportunity came as the Ministry of Education school building programme swung

into its stride to meet the oncoming post-war bulge in the child population.

In 1951 the company took a long stride forward, suggesting to the Nottingham City Engineer that a school could be built of timber better and more quickly than of any other material and that the fire hazards would be less. At that stage the promise must have sounded very daring. Until then no method of fulfilling it had been tested by experience. A new building technique had to be invented for the purpose.

Idealism blended with business

Some form of prefabrication seemed to be the only answer. For the first time a modular system was brought into existence. Prefabri-Company's works and transported out to be an advantage that only a handful of men were needed for coincidence of necessities, correctly valuation. The company began to

interpreted, pressed the company towards what was to be a most rewarding line of development.

Not long afterwards the authorities wanted a school for a mining area in Derbyshire that was subject to severe subsidence. In a sense it was like planning for an earthquake region. Still more new techniques had to be devised and it was found that the modular system was admirably adaptable to the purpose. Turning in another direction it was seen that the Hertfordshire Education Committee was working on new and imaginative designs that would tailor school buildings to suit the children and that would offer an elegance not usually associated with schools. With complete confidence in their materials and methods, Vic Hallam and his associates collaborated enthusiastically in this movement. Idealism blended with business.

But the years passed; the directors were well aware that school building programmes do not last forever. Why not another stride forward from the position that had now been reached? Then, one day last year, there walked into the head office the chief of a hosiery firm that had to build a new factory with rapidity if it were to meet its commitments. Within an hour he had decided that Vic cated sections were prepared in the Hallam's could provide what he wanted. Thirteen weeks later the to the site for erection. It turned factory was in operation. This was something of a tour de force. Opportunity had been unearthed the actual building process. So a again and recognized at a true find its way in a much wider field worked out on that level. For ling poultry houses worth a few than it had ever tackled before.

This brought serious problems to the management. In building schools they had one major customer. If the Ministry of Education were satisfied that their methods were suitable the local authorities would follow. At least their sales problem was limited and definable and they were dealing with professional architects. The industrial market was different. Here there was a multiplicity of customers to be persuaded and convinced and they were mainly executives without much architectural experience. What made matters more difficult was the ingrained prejudice against timber as a building material.

Timber had a poor 'brand image.' Its associations were those of the leaky hut in the back garden. Men were frightened of the fire risks. Actually, as Roy Hallam, Vic's nephew, in charge of the timber building division, made clear to me, the fire risks with a wooden structure are small by comparison. Timber neither buckles under great heat like metal nor explodes like concrete. It chars. But how could this be put across?

Salesmanship was the obvious answer but it has been a boast of this firm never to have relied on a high pressure sales force. The idea has always been to put prospective clients in touch with the technical

instance, a client's architect will be introduced to the Company's architect, Alan Roe, and the two will make the solution of the problem a joint endeavour, the one knowing what he wants and the other knowing what can be done.

Yet this kind of approach, when meeting an entrenched prejudice, needed supplementing. The introduction had to be more carefully considered; more analytically planned. With an almost unexplored territory before them where were they to start? Public relations and well-placed advertising were found to be the solution. The columns of the press and the statistics of investment, productivity and consumption are studied to find in which industry building is likely to be undertaken. Then a public relations and advertising campaign is directed to that particular quarter. The results are satisfactory.

Garages-and poultry housesare still made. In this field another break-through has been achieved. Mr. Pilkington is an expert on poultry keeping and runs an experimental farm. This interest contributes to the business. types of poultry houses are tested on the farm which has also become a demonstration unit for potential customers. Three or four years ago it was realized that in this field as in so many others, the little man was giving way before large-scale staff and to let the problem be production. Now, as well as sel-

tens of pounds, Mr. Pilkington is providing broiler and breeding houses worth a few thousands.

What demands on organization has this process of evolution made? The founder directors have realized that the firm's tremendous growth might ultimately outstrip their own energies. To maintain its youthful vigour and progressiveness and to create a management succession, they have recently added four more to their number, well distributed over the age groups.

For financial reasons it has been found convenient to organize the enterprise into three companies. The main one is Vic Hallam Limited, controlling all the manufacturing interests. Vic Hallam (Contractors) Limited has charge of the erection on the sites of all prefabricated buildings and also engages in conventional building. Glazebrook Transport Limited operates the considerable fleet of lorries and cars that transports the materials. men and Owning vehicles, it has been found, gives better control and lower running costs than does hiring. But for practical purposes the associated companies are no more than departments of the main firm and it is in that spirit that they work.

Now, as always, the main policy is to look into the future. Readiness to consider new ideas and to explore untrodden ways is characteristic. Alan Roe, for instance, is experimenting with a new technique of constructing beams and planks that would drastically reduce the bulk of timber used and therefore the cost of building. New preservatives are coming into use. If successful such experiments could point to future breakthroughs. In any case, the promise of expansion is so great that, before many years have passed, the firm may have to abandon its private status and reach out for more capital. In the meantime planning and forethought are racing ahead.



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Gestetner and the

A few minutes' conversation with Mrs. Nora Potter will quickly dispet any illusions about Sussex being only a nice place to retire to, and Brighton a mere watering place. For Mrs. Potter is Vice President and Hon. Secretary of that remarkable organisation, the Federation of Sussex Industries.

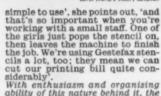
Birth of an idea

The F.S.I. evolved from a Mutual Aid Group formed during the last war to achieve greater national efficiency during times of material efficiency during times of material and manpower shortage. Such groups existed throughout England, but only in Sussex did the idea survive and flourish. Mutual aid is still the Federation's primary function, but on a much broader canvas. Its object is to put Sussex industry on the map, by means of annual (15th this year) exhibitions, co-operative advertising exhibitions, small local exhibi-tions, co-operative advertising, frequent meetings to discuss pros-pects and learn from visiting lecturers, visits to overseas and other exhibitions and conferences (Paris last year, Moscow this), entertainment of guests, and a continual dissemination of infor-mation 'where we think we may secure an order for our members secure an order for our members or direct attention to our organ-

Services to Industry

Mrs. Nora Potter is in charge of day to day administration. Appointed late in 1955, she made





siderably. With enthusiasm and organising ability of this nature behind it, the Federation of Sussex Industries is surely a force to reckon with. Gesteiner are glad to be associated with the Federation, and proud too, through their Brighton branch, o being members. being members

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BUSINESS

New Pipelines for the Gas Accounts

Nationalization involved a big accounting problem for the North Western Gas Board. A computer brought greater effectiveness, as well as modernity, to the system



Robert Kerr was the man behind the recent changes

ESTING day in 1949 brought its own problems to the North Western Gas Board. Moulding 103 different undertakings into one presented the board with major problems of procedure, standardization and co-ordination.

Two-thirds of the gas undertakings taken over were previously owned by local authorities. Wide differences existed in the various office systems and accounting propedures. The problem was further complicated by the lack of accounting equipment and machines, and suitable office accommodation.

By 1954 order had been introduced, so Robert Kerr, the board's chief accountant, turned his attention to the possibilities in the use of electronic equipment. At this time, the accounting procedures were highly mechanized by any standard. The 10 group offices, where the bills were prepared and printed, were all well equipped with keyboard machines. There were also four punched card centres for the north western area. But an examination of clerical work gave an opportunity of considering the advantages of computers, then beginning to interest

country. Out of the investigations made has come one of the most modern and effective central statistical and accounting services in the gas industry. At the basis of it is a computer centre which can handle five million bills a year, and provide the board with all the statistics it requires.

The 405 National-Elliott computer is housed in a specially designed building on the site of the old Altrincham gasworks. The building consists of an eleven-sided structure with a central courtyard, and a rectangular annexe housing certain administrative offices, cloakrooms, and the tea room. The interesting point about this building is that it is made in the contemporary style now associated solely with computer establishments. Throughout, great attention has been paid to colour schemes, air conditioning, and services for the staff.

In the circular part, the bills are handled. Each room leads to the next permitting a work sequence from the receipt of the meter reading books to the despatch of bills.

The work at the centre is organized as follows. The information from the larger organizations of the the meter reader's books is punched PROBLEM No. 1



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BUSINESS

by machine operators on to paper tape and this is then fed into the computer. The basic details about each customer (name, address, tariff, meter rent, hire purchase charges and so on) are stored on a magnetic film. These two are then run off together: the computer does the necessary calculations and passes the resulting details on to another magnetic film which can be taken to a line printer. The computer can do 10,000 calculations in one second, and each reel of film carries records for about 4,000 consumers.

The film is afterwards put into a high-speed printing machine which decodes and prints out the bills on continuous forms, properly spaced, at the rate of 150 lines a minute. The stationery is then placed in a cutting and folding machine which prepares them for despatch.

Things are now "running true to pattern," says Robert Kerr. But the pre-planning, teething troubles and the recruitment and training of staff presented many problems which stretched over several years.

The strange habits of customers

investigation mentioned earlier developed into a study of whether the accounting work undertaken at the various offices was suitable for a computer. Complementary to this went an examination of the computer systems available.

The feasibility study lasted some eighteen months before the North Western Gas Board was able to decide that customer accounting was the application which would best lend itself to the use of electronic equipment, and that the National-Elliott 405 Computer was the best computer most suitable for this work.

system, an IBM punched card unit and a Swiss Kern folding and enveloping machine. It took some time to blend the various pieces and them work together



The computer building at Altrincham was designed to fit the machine and to provide for a smooth flow of work

major faults and only small alterations were required.

On the planning side, the board's Organization and Methods team were involved in the study at a very early stage, and once the decision to proceed was taken, they started on the job of designing a procedure for every variety of behaviour between the consumer and the board.

In addition to the normal changes in names, addresses and meters, they were faced with some amusing variations. What about the customers who pay part of the bill or who pay twice-and then pay again on the credit note! Each one presents a problem when planning to use a computer

The identification of consumers (and there are 1,800,000) presented a formidable task that had to be solved before progress could be made. This was overcome by allocating a code number for every person which included group, district, street and house numbers, with an expansion possibility for more streets and houses in any developing area, to be added without affecting the coding principle. With 20,000 credits and debits handled daily and each account being processed every 10 days, identification became impera-

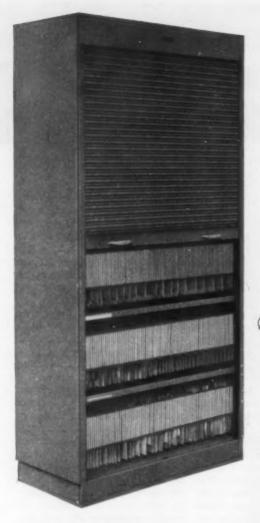
Perfect consumer recognition was It included a French bull line necessary because the aim of instituprinter, a Creed paper tape punching ting a computer system was to permit all central accounting work to be completed from the original entries. The employees who are in contact with the consumer are the pivot upon which the whole system

receive money or make agreements. The correctness of their dockets decides the correctness of the input, because they submit all the variable information. To keep a planned flow of work to the computer, it was necessary to pace and replan practically every meter readers' route. But the flow is not all one way. By putting every account through the computer in a 10-day cycle, details are regularly transmitted to the local offices for the follow-ups of outstanding accounts and to dealing with all customer enquiries.

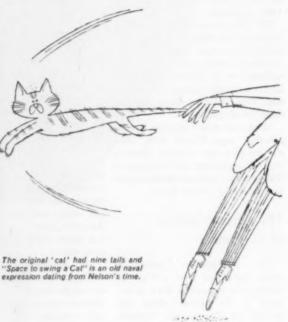
Another of the early problems was the planning of the work sequence at the centre. An examination of the quarter showed there were only 60 working days. So all work was divided into 60 streams for a 10-day cycle, necessitating six streams going through the computer each day. The quarterly sequence is as follows: (1) bill prepared and sent out; (2) and (3) crediting of any cash payment which may have been made; (4) issue of reminder notice if account not paid; (5) preparation of list of accounts still unpaid for attention of arrears collectors to meter readers; (6) Final revision and examination of outstanding accounts ready for following quarter.

An even flow of work

As the account code carries a computer running-off date and as the bills are sent out within days of printing, there can be little argument about the date when the bill should have been received. The meter satisfactorily, but there were no revolves whether they read the meter, readers work as planned; dockets



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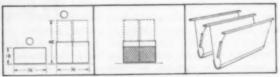


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Industry Takes to the Gypsy Life

continued from page 55

services provided by government departments. Lloyds Bank started using mobile banks in 1947, and now have five which attend as many as 80 shows a year. During the Lynmouth flood disaster in 1952, military and civil caravans played a big part in relief work. The variety in use at the moment is almost endless and includes baby clinics, travelling hairdressers, shops, laboratories, post offices, laundries and even a mobile police station.

A new style executive suite

Caravans to meet these requirements are proving highly satisfactory. Their big merit is that the salesman can take his goods to the customer: a British showroom in Europe; collection of cash where there is no office, drinks where there is no pub, and banking facilities where there is no bank.

What else does industry require, and what other uses have caravans? One enterprising company has shown the way forward by ordering a mobile executive suite complete with bar. One company head had no room for his auditors, and turned to the caravan trade to help him out with temporary accommodation. Because caravans are so adaptable, they can be used either as offices, reception centres or sleeping quarters.

Mobility of labour has been a subject for discussion since the end of the war. Its absence has been blamed for many things: shortage of labour in one area, unemployment; but one of the main reasons for this understandable reluctance to move has been the shortage of houses and the expense involved in moving—often to an area of higher rents. This problem faces Newport where a huge new steel-

where there is already a shortage of labour and houses. The company has overcome immediate difficulties by building a caravan colony. In conjunction with a local distributor, it is developing a site to house 1,000 caravans. Another, similar, scheme is expected when the Rover expansion takes place near Cardiff. The army too is paying greater attention to housing soldiers in caravans. There are big orders for what are primarily standard production models, and a few more major caravan towns could change the whole economics of the industry.

At the moment the caravan industry is very confident. It has increased its production three times to over 50,000 units in 10 years, and by the expansion plans of most manufacturers, it looks as if they intend to maintain the impetus. There are continual improvements in design, especially

works is being built in an area in the type of axles and weight of where there is already a shortage of labour and houses. The company has overcome immediate also turning over to production in difficulties by building a caravan batches of not less than 100.

One of the surprising facts about the manufacturing side of the industry is that Bluebirds (the largest) is the only public company. Several of the remainder are in the very unhappy position of having full order books but not the capital to expand fast enough. Several have so pushed ahead with their plans as to have put themselves in financial difficulties. If the industry is to meet and satisfy the demands which are now being made for all kinds of mobile units, further changes will have to be made in ownership and organization.

But the evidence is there. The business world has many uses for caravans and the demand is forthcoming. At the moment it is on the rise.

Keeping Tabs on the Stocks

continued from page 53

to a period of four years. Both cards are filed together on a card index system.

The daily cards show each transaction, invoice number and stock The monthly returns, which are by far the most important, give in addition to the monthly totals the maximum and minimum stock figures. Two main reasons why these cards are so important are that they reveal business trends and show seasonal variations. Because the motor trade is so dynamic and subject to so many fluctuations, Dees have found it necessary to review their stock levels at frequent intervals. Items sometimes show monthly totals well in excess of normal stock levels. Unless levels are changed to meet such increases-as well as decreases-the whole idea of planned ordering is vitiated. Some of the more violent changes

that occur would defy any system. This is what the trade knows as abnormal demand.

Monthly ordering means monthly checking of the balances. Weston has overcome this by the skilful use of coloured tabs on his record cards. Four different coloured tabs used in conjunction with four separate columns will tell at a glance what items need examining. As 160 cards in each tray can be seen together, the job of keeping a check on the records has been greatly simplified. The tabs are moved by the clerks as they make their entries: if they fail in their task, end of month checking will be more difficult.

Reliability is an important asset to any company. So is an inviting public façade if the customers are to be attracted. Dees are fortunate. They have both.

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EXECUTIVE CAR REPORT

HE Triumph Herald 1200 is one of the most delightful cars I have ever driven. After the first few minutes at the wheel of the test car. I was mentally singing the praises of the precise, light steering, and of the sensibly chosen gear ratios.

In my experience this is one of the best-suited cars for town traffic conditions because it may be manœuvred effortlessly at low speeds with complete exactitude. Also, the close ratio gears invariably enable one to find the right gear to suit the rate of advance of a slow-moving traffic stream, and so avoid that constant juggling with accelerator and brake which is the feature of too much town driving.

The narrow turning circle and wide steering lock of this car have been well and truly emphasized in the advertisements. But all the same, the ease with which it may be slotted into a parking space only a little bigger than the car's own length has to be experienced personally before its true value is appreciated. Manœuvrability is also facilitated by the square-cut bonnet line which leaves no vulnerable protrusion invisible from the driver's seat.

Out of town the Herald's third main virtue becomes immediately apparent. This is its almost uncanny road-holding. If ever the expression corners on rails' applied to a popular car, it certainly applies to this one. Quite a few ordinary cars may be cornered hard these days, but usually at the expense of squealing tyres and a rear end which slides or hops after the front wheels in a more or less alarming manner. This car may be driven round corners at speed without attracting the disapproving attention of other road users, and without sliding your passengers all over the car. The flatness and absence

Heralding the new .

of roll on corners constitute my most enduring impression of driving the

The 1200 is the somewhat more powerful version of the original Triumph Herald, but in my opinion the car is still under-engined. To find a car which inspires such confidence in the driver racing the heart out of its engine at 75 m.p.h. is rather frustrating. Similarly, although acceleration is lively on the flat, and when the car is unladen, torque falls off very rapidly with gradient and load. With four people in the car, passing a grinding twelve-wheeler on a hill takes a lot longer than it ought.

The comfort of the seats has been

improved on the 1200, and the boot is remarkably capacious for the size of the car. The accessibility of the Herald's engine should be studied by all other car manufacturers in the country, and the appropriate lessons

I would thoroughly recommend the 1200 to any businessman who likes to be able to use his car around any of our more crowded cities. would also be an ideal second car for the family. His wife would certainly approve, and, what is more, at the wheel of a Herald she will be less of a danger to his No Claim Bonus,

Price: Saloon £708 (£721 de luxe), heater fitted as standard.

. break with tradition

T DOESN'T take many miles of motoring before one is confronted with the familiar rear view of a commercial vehicle travelling in the same direction, and all too often there is ample opportunity in which to consider the subject. The scene is unchanging but nevertheless well animated. The rear wheels leap and bounce, tailboards register every conceivable complaint while the vast oil-stained differential grinds impassively on.

Occasionally the pursuing motorist has a further attraction, this being a curious length of rope-traditionally

knotted and frayed-which moves with all the hypnotic abandon of a Balinese. Such delights of motoring will soon become a rarity as commercial vehicles show more æsthetic tendencies, a fine example of this new line of thinking is the 'High-Bulk' Luton van which in appearance and behaviour has none of the old vices.

This vehicle is a product of Bluebird Caravans whose imaginative approach, using the Morris J2 or Austin A.152 chassis, has resulted in a 15 cwt carrier which ably fills the gap between the extremes of vehicles of

continued on page 75



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EXECUTIVE CAR REPORT

continued

this nature, i.e., the pantechnicon and ultra-light van. The carrying capacity is 440 cu.ft., an important factor since while the vehicle is not really acceptable for the exceptionally heavy type of load—large engineering parts for example—it is ideally suitable for example—it is ideally suitable for large and bulky items of fairly low density. The vital statistics of the body and Luton respectively are: length 9ft. 6in. and 3ft.; width 6ft.; height 7ft. and 2ft. 2in. The body framing is constructed from

seasoned hardwood which, like the interior tying battens that are fitted, is stained and smoothly finished to provide a neat appearance.

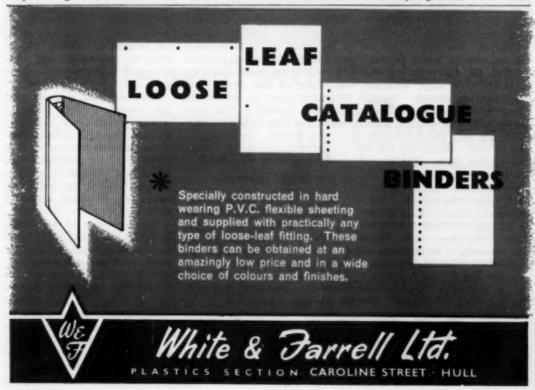
The exterior of the vehicle is panelled in aluminium with a translucent fibre-glass panel fitted into the full length of the roof to give natural lighting. For maximum ease of loading the heavy duty tailboard is fully adjustable, complete closure is gained by an easy to operate roller shutter which is fitted to the head of the rear.

Threading my way through the bustling traffic of London's docks area was not the easiest of introductions to this kind of vehicle. In spite of some early apprehensions it wasn't long before I began to realize that the vehicle handled well. Apart from the limited rearward vision there are no blind spots, the cab has a high degree of comfort, the steering is positive and the brakes, although stiff to operate, really work well. While my demands on the transmission were unnecessarily high there were no screams from the belaboured gearbox.

The noise level in the cab was quite low, an indication that the B.M.C. Series B 1½ litre engine—which is centrally mounted between the driver and passenger seats—has been well and truly muffled. The seats are adjustable but not to any considerable extent. This is important since the foot pedals are floor mounted and only 30 deg. from the vertical. The net result is an uncomfortable amount of ankle work.

By the time I returned the vehicle to its rightful owners I felt that both I and the 'High-Bulk' had passed our tests with flying colours, in fact even the Blackwall tunnel—circa 1897, horse-drawn traffic only—had been confidently negotiated.

A.B.



Big Business Through the Slot

In the United States automatic venders are steadily ousting salesmen. For lunches they are cheaper to run than a canteen

F YOU had spent millions of dollars - literally - on a magnificent machine for vending men's underwear, would you test it by placing it in the toy department of a West End store? "Of course not," you reply. "No one but an imbecile would do that." Wrong again. This is precisely what happened to a huge, automatic, merchandizer recently 'market tested ' by the vast Universal Match Corporation of America. It landed -7 ft. 4 in. high, 7 ft. 8 in. wide and 43½ in. deep-amongst the toys in Macys, New York. The result? The vests and underpants remained where they were-in the machine's shiny, glass compartments. Three days later it was moved. It did not go into the underwear section, but amongst the men's hats. Which was something of an improvement. And there it remained for a couple of months, before being shipped back to the factory to 'iron out the wrinkles."

This incredible tale is a splendid illustration of modern, American business. Here is a new machine which—at long last—allows the customer to buy expensive goods. It is far cheaper to buy cigarettes by It can accept one-dollar and five-

dollar bills, deliver the goods—and give the correct change. Modestly described by its proud parent company as "a break-through in automatic vending which is comparable . . . in its field . . . to the breaking of the sound barrier in aviation," it is made to sell the wrong merchandize to the wrong people in the wrong department of one of the most progressive stores in the country. Altogether, a blend of 1984, robot wonder, and 1894, Victorian muddle.

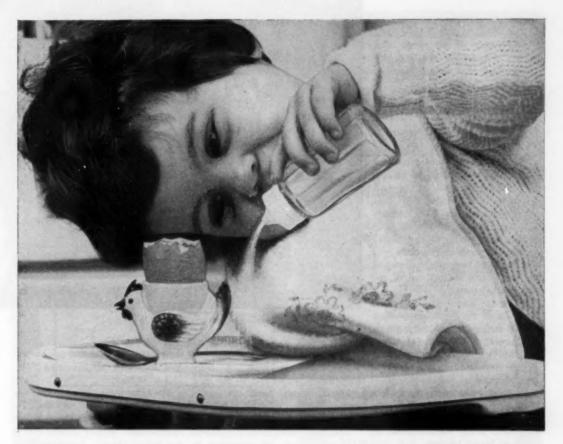
Genuinely day and night service

Still, the machine itself is a marvel. And it opens the door to new advances in automatic vending. Take cigarettes, for example. 15 per cent of American cigarettes are bought through machines—nearly 1,038 million dollars' worth of them. Selling by the packet of 20, they are by far the biggest single item sold by machine. They provide day and night, convenient and speedy service from a salesman who won't answer back. But the product is expensive. It is far cheaper to buy cigarettes by the carton—ten packets of twenty in

a long box. But until now, no machine could sell by the carton—far too many coins would be required. But before long, machines will sell cartons of cigarettes by the million. And the local tobacconist and confectioner—already trodden under by supermarket and drugstore—will be dealt another mortal blow.

In the meantime, machines greet you everywhere. Soft drinks—in cups and bottles—are second to smokes. About 400 million dollars' worth were sold that way in 1959. Confectionery — chocolate bars, sweets and biscuits—come close behind, followed by coffee, ice cream, milk, hot soups, cigars and all the rest.

The basic reason for their success is the high cost of labour. Factories and offices, schools and colleges, youth clubs—yes, and prison commissaries—are all deserting their unprofitable, well staffed canteens and allowing vending machine operators to take over. "Something that goes by the repellent name of in-plant feeding installations," said Time Magazine, represents "the biggest area of growth within vend-



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"Common" is an unkind word when applied to salt. This amazing mineral, essential to life itself, deserves an adjective as noble as its many virtues. It serves many vital purposes in industry, but its major duty lies in the home. Here Cerebos Table Salt, refined to a dazzling white purity, conjures from even the most insipid dish a mouthwatering flavour, adds a sharper delight to even the spiciest food. A meal without Cerebos salt might nourish the body, but it would certainly never delight the palate.

The men who make the big decisions at Cerebos—controlling company of the majority of domestic salt-processing firms in Britain—choose coal to heat their giant boilers. They choose coal because coal gives them the maximum heat for the minimum cost; because coal, mechanically stoked, is smokeless, and because coal, the home produced fuel, is reliable. Our coalfields can supply all the needs of British industry for generations to come.

When it is your duty to make decisions about fuel, remember Cerebos. They've proved that coal is well worth its salt. Follow their example—and you'll get the same palatable proof.

-to Grebos

Some key facts and figures about the boilerhouse at Middlewich, Cheshire and Greatham, West Hartlepool.

Boilers: 8 water tube
Method of firing: Chain grate stokers
Steam pressure: 180 and 160 p.a.i. respectively
Steam temperature: 40° F. and 450° F. respectively
Max. continuous rating: 110,000 and 73,000 lbs. of steam per hour
respectively
Annual fuel consumption: 39,000 tons of coal

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PROGRESSIVE INDUSTRY IS GOING FORWARD ON

COAL

ISSUED BY THE NATIONAL COAL BOARD

JULY, 1961

77

To be able to sell shorts and shirts through a slot machine constitutes a major breakthrough in its own field

continued from page 76

ing." Meals for the millionsserved hot or cold at the press of a button-hygienically sealed in foil, tasty and inexpensive.

Carl M. Loeb, Rhodes & Co. with 600 employees in New York, recently introduced the first completely automatic cafeteria. Roast turkey dinner at 50 cents or fish cakes with two veg. at 45 cents were samples of the daily three choices out of the total 55 dish menu.

Motor car giants-worried about losses on all their operations-have at least decided to make a profit on staff canteens. Chrysler and American Motors, among others, have already installed vending machine meal dispensers.

In offices, factories and warehouses employing small numbers of people, we found the inevitable drink machines, often supplemented by candy or biscuit venders.

The bar without a cigarette machine . . . the public toilet without at least one automatic salesman . . . the filling station without a battery of machines—they were the rarity.

To give you an idea of the variety of goods sold, here is a list of the automatically vended merchandize available in just one of the Howard Johnson chain of roadside cafeterias: razor and blades, shaving cream, combs, sanitary towels, paper handkerchiefs, perfume by the bottle . . . popcorn by the bag ('see how it works') Saturday Evening Posts, Readers Digests . . . rolls of sweets, packets of chewing gum, sachets of Alka Seltzer . . . jumping beans in many colours and magnetic dogs that, on the slightest provocation, tail . . . pocket knives, nail clippers,



. . . ballpoint pencils . . . and your their letters to their correspondents. weight, for ten cents. A truly magnificent array—and all this in a cafeteria which feeds thousands daily at its crowded, spotless English businessman is that he counters.

Machines, then, were everywhere . . . selling you life insurance at airports . . . shining your shoes in restaurant basements . . . washing -and now cleaning-your clothes at coin-operated launderettes . . . quenching your thirst and appeasing your hunger . . . blowing hot air on your hands and face to dry you and dispensing ice cubes, ice-creams and iced drinks to cool you.

An idea for **British inventors**

True, we have more outdoor vending in Britain-but then our shops close in the early evening and American ones stay open to the pencils . . . pleated, plastic scarves coins into stamp machines, to speed for you?

Yes, automatic merchandizing in the U.S.A. is booming.

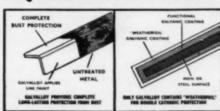
The other moral, of course, to the should look around and see whether merchandize vending couldn't help him in his business. Americans have excellent coffee machines and the ancient, rattling drink trolleys are fading decently away. We in Britain now have three, excellent varieties of tea venders. How long is the unsanitary trolley, the vast, chipped pot, the evil tasting liquid or the costly canteen to remain part of your business undertaking? long as they do not become too costly, perhaps . . . But then. . . .

Finally, a suggestion for a British inventor. The new American vending machines reject slugs and imitation coinage. So do ours. But the notechanging machines can fool the biggest rogues because they reject bogus notes through a magical most ungodly of hours. True, some recognition of the ink used in the folk hate the impersonal, penny in real ones. But our ink is differentthe slot-but even they use the coin and no one has yet learned to leap disgustingly together, nose to changers to get money for the tele-recognize that . . . So if you cannot phone machines which allow them make a fortune any other way, why tooth brushes, key cases, styptic to speak to their family or insert not invent a machine that will do it END

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out the quarter.

even flow throughout the quarter, equipment.

North Cheshire, with 100,000 consumers, was the group selected information was recorded, and the dockets from the meter readers were sent to the centre throughout the over. The danger of a breakdown in organization was not ignored, and a standby system was devised. But it was not required. All regions are now being transferred quarter by quarter and the centralized system year.

To organize and establish a computer system was not the only problem. It meant centralizing work for a basically decentralized organization, and this resulted in some grades of employees finding their jobs affected, especially in the group and district offices which previously prepared accounts and helped with the statistical work. The board recognized the need to keep the staff fully informed of what was going on, and this they did through line management, staff committees and trade unions. They also decided in 1956 (before the order for a computer was placed) that recruitment for all clerical posts would be on a temporary basis. This was four years before any redundancy or redeployment arose and did much to could be followed with advantage by other business organizations.

accommodation highly mechanized office handling meter readers were taught the concentrating its attention.

are sent regularly into the centre a great volume of data. Great meaning of the system and the need from all parts of the area; bills flow consideration was given to layout for a systematic and correct out as scheduled; and money is and equipment; ergonomics has hit approach. This training has already received at all local offices through- Altrincham with a bang! Most of reduced weekly correction time from the girls are employed in the punch 10 hours to less than an hour. The work is planned to permit an room—where the copying from the maximum use of staff and capital the girls excellent comfort. The desks placed three side by side in the circular room, allow each girl to have an outside view as well as to see for the first run. All the basic the back of someone else's head. The desks, which are stronger than most because of the heavy paper tape punching equipment, have a work drawers.

Training schemes for operators

Despite the excellent conditions, should be fully operative by next recruitment of girls has proved difficult so far in Altrincham. The board's own Education Department has, in conjunction with the local Youth Employment Officer, laid great stress on the nature of the work offered and the ideal surroundings. The board has even entered matched and dealt with. show what they have to offer in the locality.

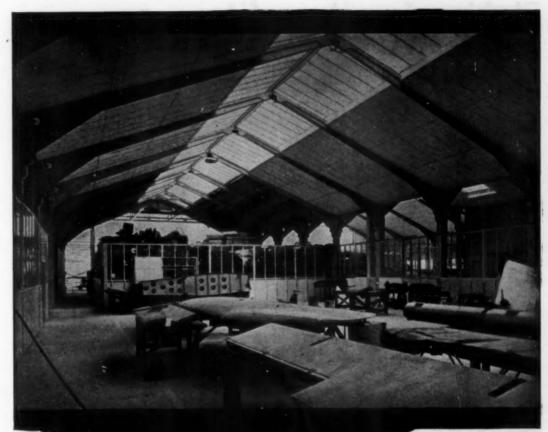
staff tackling not only an entirely nothing has gone wrong. ease the transition-a policy which new job, but a new concept. This As I toured the centre, I was eradicate this the board lays great effective for the 160,000 consumers struck by the attention given to emphasis on the type of girl they of the Board in the North Cheshire employees comfort and working enrol and the training given to them. and South Lancashire districts. What conditions. Robert Kerr assured A comprehensive training pro- we are after now, says Accountant me that this was not accidental: gramme is one of the features of Kerr, is to be more efficient by having decided that a new building Altrincham. A computer centre carrying out this work just as effecwas necessary it was realized that means big changes: employees' opportunity to ideas had to be changed to make it our equipment and staff. a successful. At the grass roots, the

The maintenance of the computer meter readers' books is made. The and the Line Printer is carried out avoiding peaks and making the adjustable chairs and footrests give under contract by engineers of the manufacturers, who also deal with any breakdown in operation. Maintenance is on a preventive basis, under which the component parts of the computer are replaced and tested on a regular cycle over 40 days. Experience has led to several modifications to the computer since quarter allowing a gradual change- tray instead of the traditional set of it was installed, and a number of amendments have been made to the original computer programme.

> Computer accounting presents its own problems of checking its accuracy. At Altrincham there are routine procedures to ensure that all information input to the computer agrees with original entries: for example, cash postings with cash received at district offices, and the programme for the computer, contains many checks to ensure that information has been correctly the Careers Exhibition at the local aggregate amount of all bills pre-Girls High School so that they can pared in an operational run is agreed absolutely with the statistics of output such as analysed gas sales in The task of organizing the work volume and sterling, sales analysed and solving the human problems over rating areas, and so on, and involved were only two of the many financial control accounts ensure that confronted the board's officers there is complete balancing for each since the idea of a computer centre process day in respect of all gas was first mooted. Even since the charges and hire purchase balances. centre has been working, several Finally, accounts to be sent to others have come to light. Many consumers are quick-scanned, and human errors were recognized as the one account in every hundred is symptoms of insufficiently trained closely examined to ensure that

> The installation, although only was especially true of punching and operating on about one-sixth of its verifying errors at the centre. To ultimate output, has proved wholly tively but by making less demands on

> > That is where the Board is now



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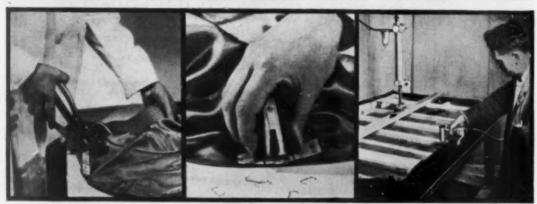
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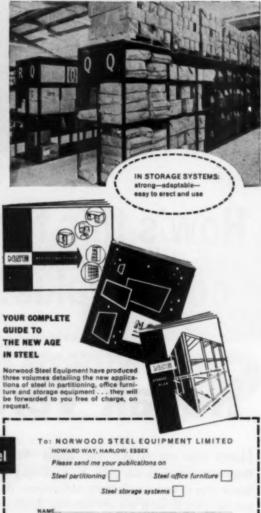
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Accurate and compact

pound. Available in two models it has been designed as an aid to the use of calculating machines when they are used in the multiplication and division of sterling.

It is operated manually by the two knurled wheels on the left-hand side of the machine, and apart from the ease and speed of setting, it avoids the fatigue and eye strain associated with the reading of decimal tables. The machine is extremely accurate since there are no columns of figures to decipher and the sterling amount with its decimal equivalent are shown side by side.

The machine is compact, measuring 6¼in. long 2½in. high, and provides decimal equivalents from ½d. to 19s. 11½d. to five places of decimals, the alternative model provides for six places of decimals.

Enquiry Ref. No. 07/1

Sorting out the silver

Joining a wide range of sorter/counter machines is a new unit which counts and sorts a mixed bag of silver containing any or all of the four English coin denominations. The machine does both of the operations simultaneously and

has an unusually fast performance. Its average speed for sorting and counting a mixed bag of silver is £2,000 an hour, while with a bias towards the two larger coin denominations mixed silver will pass through the machine at the rate of over £2,500 per hour.

The operation starts with the emptying of the silver into a coin receptacle from which the coins



are fed automatically into the sorter. The sorted coins then pass simultaneously through the counting system and drop individually into boxes or bags. The quantity of coins handled is indicated on counters, and automatic cut-out stops provide facilities for bagging in £5 values if necessary.

Alternatively the machine can be set to sort and count the three English copper denominations in the same way.

Enquiry Ref. No. 07/2

Duplicator with a big heart

This new fully electric duplicator, called the 380, has been primarily designed to accommodate the larger paper sizes. All copy matter, figures and statistics, can therefore be printed on one page. The increased space available results in easier to read layouts, greater accuracy and a more attractive



For large paper sizes

presentation — an advantage with the present trend to larger typewriter faces.

With the 380 it is possible to print on paper measuring up to 17½in. by 14in.; with model 380A, 17½in. square; with model 380B, 17½ in. by 19½ in.

Such large size duplicating should prove particularly useful when dealing with accounts sheets, monthly statistics, balance sheets, lading lists and schedules. At the same time the machine is extremely flexible and the model quickly adapts to accommodate all normal office paperwork sizes, down to 3 in. by 5 in. postcards.

Another feature of the machine is that no matter how long the run the synchronized automatic inking control ensures that each sheet receives the exact amount of ink required. The control, allied to a self-centering pressure frame, gives an even, positive register.

An improved self-adjusting paper feed—with a feed board lift adjusting itself every three copies—ensures firm delivery of all paper stock. On the delivery tray a jogger mechanism finely aligns each

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printed sheet on the pile and maintains regular stacking.

When non-duplicating paper is used a special mechanism slips absorbent pads between each sheet to completely eliminate any chance of 'set-off.'

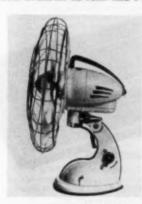
The easy to handle controls are coloured and grouped to one side of the machine for convenience. Greater control is given to the operator by an automatic counter which allows up to 100 copies per minute to be duplicated and stops the machine after the required run.

The machines are well styled. The cabinet is attractively finished in matching three tone grey and incorporates four spacious drawers for the storage of paper, colour change kit, and accessories. Easily movable on its own wheelbase, an adjustable foot enables level operation on uneven flooring.

Enquiry Ref. No. 07/3

For keeping cool under pressure

Replacing an existing range of fans is the new Essex model which is now available in 12in. and 14in.



Increased performance

sizes, and for either desk or pedestal mounting.

The new model is of modern design and has a much increased performance, the 12in. fan having an output of 1400 cfm. The stop/start control and three speeds are provided by a rotary selector switch, and another switch gives

the choice of either a fixed position or oscillating movement.

Enquiry Ref. No. 07/4

Low-cost intercom unit

An already well established range of low-cost intercom systems has now received the addition of a five-button instrument. It can operate as a master unit, controlling single-button extension, or in a system where all telephones are able to call each other.

As a master unit the five-button instrument can connect with up to five single-button instruments for full intercommunication. Used in a fully communicating system up to six five-button instruments can be connected together allowing full



Push-button contact

communication facilities between each point.

The installation of either system is relatively simple but it will be carried out by the manufacturers if required.

Enquiry Ref. No. 07/5

Finger-tip telephone index

This completely portable telephone reference, known as the Cayse telephone index, is equipped with an instant finger-tip control which should prove a time saver.

The unit embodies an angle action which shows names and numbers at a comfortable angle for easy reading. When opened fully the index provides a firm pad for the executive who prefers to write in his telephone numbers, although the cards can be easily



Compact and portable

slipped out for typing in numbers.

The portable index does away with the need for duplicate records of telephone numbers and can be conveniently carried in a brief case, so providing a means of having a complete record of telephone numbers to hand at any time.

The padding in the front and base, and the durable grained P.V.C. finish give the index a luxury look. Trimmings, including the indexed alphabet, are in gilt and the colour range is black, red, green, brown.

Enquiry Ref. No. 07/6

Keeping an eye on schedules

Ideal for providing visual control is the Rol-a-Chart, a simple system with many applications.

The basis of the chart is a stationary index where the scheduled items are annotated i.e. customers' orders, job numbers, men or machines. Final deadlines and intermediate operations are written on the rolling sleeve opposite the index listings. The time units—hours, days, weeks or months—are entered on the top line of the rolling sleeve.

The chart is operated by rolling the plastic sleeve to the left daily, or in accordance with the time units, to bring all scheduled and dates closer to the 'Today' line and give advance warnings of things to be done if schedules are to be met. Schedules which are not met move past the 'Today' line and enter a special zone where they serve as a constant reminder of the need for corrective action.

Posting on the chart takes only a matter of seconds since the operator can write directly on the plastic laminated index or the rolling plastic sleeve with a special pencil. Any revision can be made instantly by wiping off the old entry and making the new one.

Colour coding makes the chart even more versatile and the thinlead Rol-a-Chart pencils are available in 5 colours. China marking pencils can be used if necessary.

Due to the unique rolling sleeve the unit provides 8 sq.ft. of chart area in a wall space of only 23½in. by 25in. The charts can be



All under control

stacked one above the other or for large installations special 'swingout' wall brackets permit back-toback mounting.

The Rol-a-Chart is completely portable. It is equipped with a retractable handle and a folding easel so that it can be easily carried about or placed upright on a desk. The complete unit weighs 9½lb.

Enquiry Ref. No. 07/7

A suite for the top man

The manufacturers of a well-known range of office furniture have just produced their Executive Suite designed for the top man. The result is a range of dignified yet strictly practical furniture in sapele mahogany. The basis of the range consists of double and single pedestal desks with overhang tops 96in. by 42in. or 76in. by 36in. in size, with boardroom tables of the same dimensions.

The suite, in addition to matching chairs, also includes bookcase/



Dignified yet practical

c o c k t a i l cabinet, wardrobe, occasional table, telephone cabinet table, waste paper tub and letter tray. Each standing piece has specially angled tapered legs which are fitted with satin brass ferrules. The ferrules are adjustable so that the suite units may be levelled.

Enquiry Ref. No. 07/8

Keeping paperwork pinned down

Now available in Britain is the full range of *Bostitch* stapling machines which during recent years has had considerable success in the United States.

In the smaller 'B' range, the B.8

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that is already in use by many business similar to your own. After exhaustive appraisal the H-800 was chosen by such experienced computer users as the Massachusetts Institute of Technology Chrysler Corporation, Metropolitan Life, U.S. Army Finance Service, Northern Illinois Gas Company. Philadelphia Electric Company, Oregon State Motor Vehicle Bureau. Standard Pressed Steel Company.

AUTOMATIC ERROR CORRECTION

Honeywell's exclusive data-protection principle, called Orthotronic Control, makes it possible to reconstruct lost, damaged or garbled data instantly and automatically. This feature is standard.

PARALLEL PROCESSING ... FOR I.D.P.

The H-800 has been specifically designed to allow the complete integration of all an organisation's data processing functions. Up to eight different jobs may be handled at the same time. For example the H-800 will answer a random enquiry, bring an inventory up-to-date. process a payroll, make a complex engineering calculation, make a special analysis, and handle three other jobs at the same time. It uses a programming language made up from simple words . . . detects and corrects its own errors without human intervention . . . expands with the user's needs and can never be outgrown.

'ONE OF THE BEST EXAMPLES OBSERVED'

A Honeywell scheme for Integrated Date Processing was singled out in the report made by last year's O.E.E.C. mission to America as 'one of the best examples' of a plan for the integrated flow of data through a manufacturing organisation.

Enquiries

Honeywell Controls Limited have established in London an Electronic Data Processing Division, and a Computer Service Bureau is being established, at which you will be able to see and use the Honeywell system. Enquiries should be addressed to: Electronic Data Processing Division, Honeywell Controls Limited. Greenford, Middlesex. Waxlow 2333.

> Branch Offices in principal towns and cities in the United Kingdom and throughout the world.

Honeywell



H Electronic Data Processing



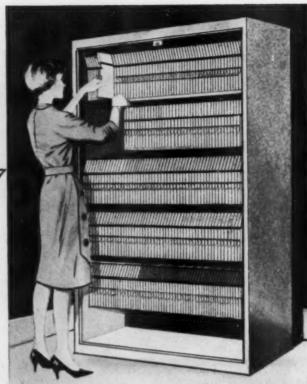
VETRO/Lateral CUPBOARD

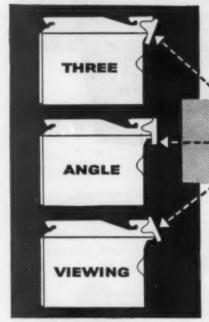
for greater space saving

No wasted space, no drawers to open, all folders visible and located immediately. Sturdy, space saving construction using good quality furniture steel. Grey hammer finish with matching grey plastic loaded roller blind.

Overall size approximately 72" high \times 36" wide \times 18" deep.

Fitted five sets of bars from which 400 folders can be suspended.









Completely redesigned to give maximum visibility irrespective of whether the folder is at, above or below eye level.

Made of strong good quality manilla to withstand heavy wear.

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LOOSE LEAF BUSINESS SYSTEM—THINK OF TWINLOCK

4-in-1 Every Day is probably the most widely used stapler.

Slim and compact, yet powerful enough to fasten 32 sheets of 16 lb. bond, the model is equally suitable as a light tacker for labelling or notice board use and, again, swiftly converts to a stapling plier



B.i2 Standard model

for sealing all types of parcels and packages. The design incorporates a unique device for swift staple removal.

Appealing particularly to the businessman is the graceful slimline B.12 Standard model in grey. black, beige or green. The clean

modern lines, combined with a powerful action which can be set for either temporary pinning or permanent fastening, result in an attractive and efficient stapler.

For heavy duty work there is the Bostitch B.5. Again attractively designed for desk-top use, it is sensitive enough for light finger-touch operation. In two-tone grey or black the B.5 is loaded through an aperture in the front and is almost impossible to jam.

Other office models in the range include the B.8S Saddle stapler which is ideal for fastening folders, rosters, programmes and booklets; making up dummies and repairing magazines. A wide range of work up to a page width of 12 inches and 128 pages can be speedily and simply handled.

Enquiry Ref. No. 07/9

A new suspended filing cupboard

In conjunction with their redesigned Vetro Lateral suspension filing folder the manufacturers have



For efficient filing

now produced a new lateral suspension filing cupboard.

The folder is basically the same being made of buff manilla, the improvement is the re-designed tab. The metal tab has been re-designed firmly riveted to the folder and is adjustable to three positions, giving

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maximum visibility irrespective of whether the folder is at, above or below eye level.

The new cupboard, called the VL250, is strongly constructed of steel and has a hammer grey finish. A spring-loaded grey roller blind is also fitted.

The over-all measurements of the cupboard are 36in. wide by 18in. deep by 72in. high. It is fitted with five tiers of adaptor bars and brackets on which up to 400 folders can be housed.

Enquiry Ref. No. 07/10

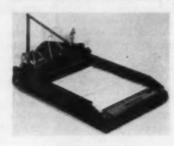
A new idea with

The new Rena model A flatbed duplicator is a portable and easily operated machine which incorporates an interesting new feature.

The machine is provided with 35 retractable studs "/22in. in diameter running vertically along each side of the bed of the unit on to which a master with corres-

ponding punched holes is placed for reproduction. After taking the required number of copies from a master of up to foolscap size, the punched master can be filed in a multi-ring binder and preserved for future use.

Subsequently, various strips from one or more masters bearing one or more lines of the required information can be taken and



Alterations no problem

assembled together on the machine by simply slipping them on to the studs in the desired order of reproduction. This makes the machine particularly useful for applications requiring occasional recasting, deletion and/or alteration of the master to be copied.

With the machine no stencils, ink or absorbent papers are required and copies are produced dry and will not smudge. A maximum of 300 copies can be produced from one master and copies can be produced in one to seven colours in a single operation.

The reproducing solvent is stored and ejected from a transparent polythene bottle fitted to the damper assembly. This enables a constant check on the level of the solvent and ensures regular and even moistening.

Enquiry Ref. No. 07/11

All-purpose accounting machine

A new all-purpose accounting machine, the N.C. 33, enables business information to be analysed under many different heads as a byproduct of routine accounting





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work. It also provides special facilities for the automatic production of 'exception' reports, and thus simplifies the tasks of management control.

The machine has 21 adding and subtracting registers, 17 of which can be manually selected from the keyboard. Because of the advanced method of construction, up to four registers can be used simultaneously. All of them provide automatic credit balances and have the same high debit or credit capacity (up to £9,999,999,999, 19s. 11d.) as the keyboard. Debit and credit balances, though printed in the same column, can automatically be accumulated separately.

As in other accounting machines by the same manufacturer, the operations of the machine are largely controlled by an interchangeable programme bar which clips on to the carriage. This means that the machine can be switched from one application to another in a matter of seconds,

making it particularly suitable for all-purpose accounting in small as well as large firms.

entry. If the operator has inserted the wrong account form or has made a mistake in picking up

There is a programme bar, made up to user's own requirements for each job, and where extended analysis is required, the machine can be linked to automatic data capturing equipment which punches



Controlled accounting

selected items into either cards or paper tape.

The N.C. 33 can perform nearly 100 different operations entirely automatically. One of these is the automatic checking of each line of

entry. If the operator has inserted the wrong account form or has made a mistake in picking up balance or control figures, the machine totally rejects the incorrect information and returns to the starting position.

In addition, the machine can be programmed to test the results of intermediate computations and, in the light of these, choose between alternative courses of action. For example, if it finds that an account is 'in the red' or that stocks of a certain commodity have fallen below the safety level, it will immediately print an action note without any attention from its operator. This decision-making feature can be used to deal with exceptional items in all book-keeping and accounting operations.

Totals accumulated in the machine's 21 registers can be printed out (with or without clearing the registers) simply by pressing a single key.

Enquiry Ref. No. 07/12

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303' SPRAY PAINTING PLANT

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VICTORY WORKS . BIRKENHEAD

— for spraying printing machine components and for factory maintenance

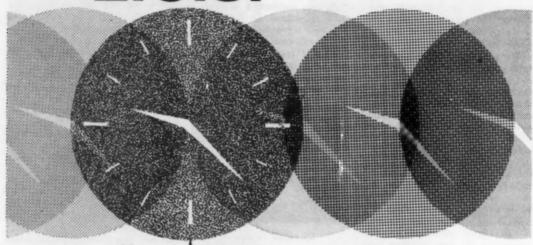




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Shooting around the bends on an automatic machine

large increase in tubular furniture and fittings, and consequently a sharp rise in the demand for improved pipe-bending machines. The latest addition to the range of equipment is an automatic bending machine capable of producing 500-600 bends an hour.

Among the unusual features of this machine is a patented device which permits the right- and lefthand bends to be made without resetting the machine, and bends of different radii to be produced without the necessity of changing centre formers.

A pre-selector on the control panel permits up to 12 bending variations without any resetting. The bending head returns automatically when the workpiece is ejected from the centre former groove. This is a mandrel type machine which has a pipe length stop assembly with 10 adjustable stops. It has a maximum capacity for steel tubes of 11 in. od by 16swg thick, but larger non-ferrous tubes can be handled.

Enquiry Ref. No. W7/1

Clamping even the irregular

During the last few years, notable improvements have been made in machine tools, but the methods of holding workpieces in the machines are in many ways



Grips the lot

Since the war there has been a unchanged. For example, one of the problems facing the production engineer is the fixing of irregularly-shaped components in a conventional vice or clamp for the necessary machining to be carried

> A block which can be inserted in a machine vice has done much to overcome this difficulty. It has a series of protruding plungers which hold the piece firmly in place. The spaces behind the interconnected plungers are filled with oil and enable them to be adjusted automatically to the contours of the workpiece.

> There is a range of eight standard blocks available with six designs of plunger heads suitable for most shapes and surfaces.

> > Enquiry Ref. No. W7/2

Never say die

Fully automatic die-casting is now possible with a unit which dispenses metal at regular intervals from a furnace. It is submerged in the ladling well and withdraws metal from below the surface.

The unit is operated by airpressure, and the quantity of metal it withdraws at one time depends upon the amount of pressure released and its duration. Various models are available and weights up to 60lb. can be handled.

Enquiry Ref. No. W7/3

Cutting costs with polish

Floor maintenance is often cushioned as one of the 'overheads' in company accounts. But in large office blocks keeping the place clean can add up during the year to thousands of pounds in labour and material costs. Tests carried out by one of the largest industries in the country

prove that by using a new emulsion polish the cost of keeping a large floor area cleaned and polished can be reduced by as much as 60 per

Research into floor maintenance has shown that with the new polish. more attention has to be paid to preparation, but with the use of the right machines and materials. daily wiping over only was required. Polish applications on well-worn areas like corridors are required every six weeks. Threemonthly applications are enough in less-used rooms.

Enquiry Ref. No. W7/4

New kind palletization

Pallets have long been used in British industry. But normally they are made of wood, heavy to use, and when hundreds are employed, expensive. An effort is now made to overcome these dis-



Holds any amount

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WORKSHOP

advantages with the introduction of thin fibreboard sheets made from semi-chemical hardwood pulps and supplementary long fibres.

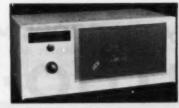
Two systems are available. One is used in conjunction with modified conventional pallets, while the other is used separately. The cheapness of the sheets allows them to be expendable easing the problem of collection and return of pallets. When used separately it is necessary for the fork-lift truck to have a push-pull attachment to use in conjunction with the handling flap.

Enquiry Ref. No. W7/5

Getting the

How to keep the air of a room clear and invigorating has been solved claim the manufacturers of an air machine. By eradicating the staleness which affects most rooms and workshops after several hours' use, it helps to keep the atmosphere fresh and cool.

It continually filters the air of a



Turn on the air

room making it dust-free and clear of odours. The standard size unit is 14in. by 6in. by 7½in. It is completely mobile, can be plugged into any available electric point, and uses one unit of electricity every 12 hours.

One machine is suitable for a room measuring 20ft. by 16ft., and it weighs less than 51lb.

Enquiry Ref. No. W7/6

Welding guns keep it cool

A new range of welding guns and torches are air or water cooled, light, and have transparent nozzles which allow perfect viewing of the work. The pencil models can be fitted with 45 and 90 deg. welding nozzles. As the electrodes are only 3 in. long and can be used to the

last ½in., work is possible in the most restricted areas.

Air-cooled models are supplied in 100 or 130 amp. capacities, and water-cooled models with a 350 amp. capacity.

The spot gun is a water-cooled portable which spot-welds steel, nickel alloys, brass, copper, inconel and so on. Feeding of gas and water to the leakproof head ensures continuous welding even at full heat.

Enquiry Ref. No. W7/7

Keeping the price right

How often has a shop marked thousands of commodities with information and prices that no one can read? Or what is worse, have a price marking that can mean several things.

In an effort to overcome these difficulties, a price marker is now available which not only locks the levers once set, but ensures complete visibility of setting and clear printing. The levers are easily moved and click into position on a cash register principle. The position bars across the base of the

• Big CLEAR spans (40'-0' to 80'-0') at exceptionally low prices

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Click up the price

machine are so arranged that it is easy for the operator to place the price in the exact position required.

The marker has a heavy nickelplated frame, has four marking wheels engraved with 4 mm. clearface figures made of specially hardened brass, and can mark prices up to 99s. 11½d.

Enquiry Ref. No. W7/8

Down the drain with rubbish

The smaller canteen and restaurant should benefit from a recently introduced commercial waste disposal unit. It is designed for the caterer coping with around 50 meals at one sitting. The cutting elements are tipped with an exceptionally hard and corrosion-resistant alloy to ensure long and trouble-free service.

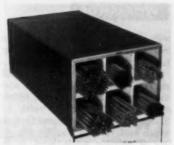
It has a \(\frac{1}{2}\) h.p. motor with a control switch panel which automatically reverses the motor at each operation, thus doubling the life of the two-edged cutters.

Other features are a built-in acoustic hood to deaden the noise in operation, and an anti-splash guard. Dimensions: height 18in., maximum diameter 8½in., weight 46lb., sink outlet diameter 3½in., waste pipe 1½in.

Enquiry Ref. No. W7/9

Keeping the electrodes

An electrode storage cabinet is available which the makers claim is the first on the market. It comes



New kind of cabinet

in two sizes: a 20in. by 11in. by 16in. cabinet with 12 compartments, and a smaller size 20in. by 11in. by 8in.

The thermal plastic compartments ensure complete protection against outside atmosphere and electrodes can be stored indefinitely.

Enquiry Ref. No. W7/10

Sweeping him off his feet

A visit to a factory still frequently reveals a man with a broom laboriously sweeping his way through different parts of the building. Now a machine is available which the manufacturers claim

VERSATILE

That's the Valor Small Steel Cupboard

Ideal for office use. Perfect for keeping stationery neatly stacked and free from dust. Solves the problem of storing files, sales literature, etc. The Valor Small Steel Cupboard is strongly built and compactly designed with one adjustable shelf. Extra shelves available, grey or green finish. Size: $36^{\circ} \times 18^{\circ} \times 12^{\circ}$.



Valor Steel Clothes Locker

Keeps clothes secure and safe, and free from soiling by dust. Available in single, double or triple units. Size: 72" × 12" × 12". Write for illustrated brochure to: Dept. B.



Valor

THE VALOR COMPANY LIMITED Bromford Erdington Birmingham 24



WORKSHOP

will enable one man to sweep 90,000sq.ft. per hour at speeds up to 5 m.p.h.

It is powered by a 9.2 hp petrol engine. It has a 42in. brush and vacuum system, and a side brush increases the sweeping width to 53in. Because of the interaction of brush and vacuum, factory sweeping is possible while work is in progress because the sweeper sucks up the finest dust before it becomes airborne as well as removing all litter and scrap. Any type of litter can be picked up. Metal chips, paper, wood shavings, sand, bottles, tins and rubbish of all kinds disappear into the 12cu.ft. hopper, which holds 800lb, and can be emptied hydraulically in 10 seconds.

It is operated by a two-pedal control.

Enquiry Ref. No. W7/11

Spray the germs away

Every year many millions of working hours are lost through illness, much of which is picked up from others at the place of work.

One test on an influenza virus with a new mixture diluted 1:60 showed that it was destroyed within three minutes.

Used in a sprayer the mixture soon destroys airborne infection, usually existing where large numbers of people congregate. The disinfectant is non-toxic and has a freshening effect on stuffy atmospheres. When used with an aerosol generator the disinfectant is finely dispersed and remains airborne for up to six hours. It can also be used for washing floors, walls, sinks, drains and in catering establishments.

Enquiry Ref. No. W7/12

Making the pump

Builders, civil contractors and farmers should find this latest centrifugal pump a useful addition to their equipment. The engine and pump are directly coupled making it a compact lightweight portable unit. One interesting feature about this machine is that it is among the first to bring the advantages of diesel engines to the smaller power job.

The maximum head is 125ft.



Portable pump

with an output of 6,500 g.p.h. The engine is air-cooled, single cylinder, weighing 160lb.

Enquiry Ref. No. W7/13

Duster that holds the dust

A cloth designed to wipe clean a surface before painting is now on the market. Made in the form of a handy-sized duster, it is impregnated with a highly plasticised non-oxidising resin which not only removes tiny particles but holds them.

Enquiry Ref. No. W7/14



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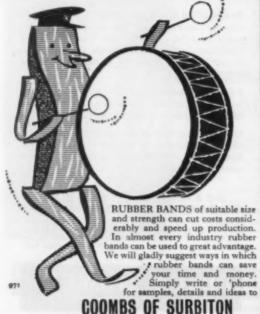
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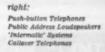
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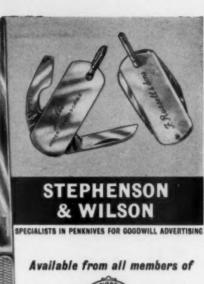
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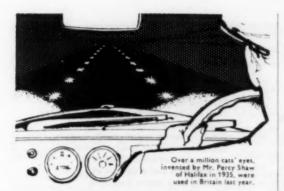
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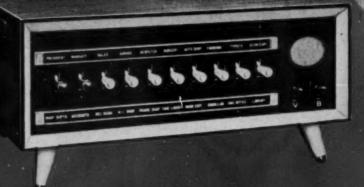
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